

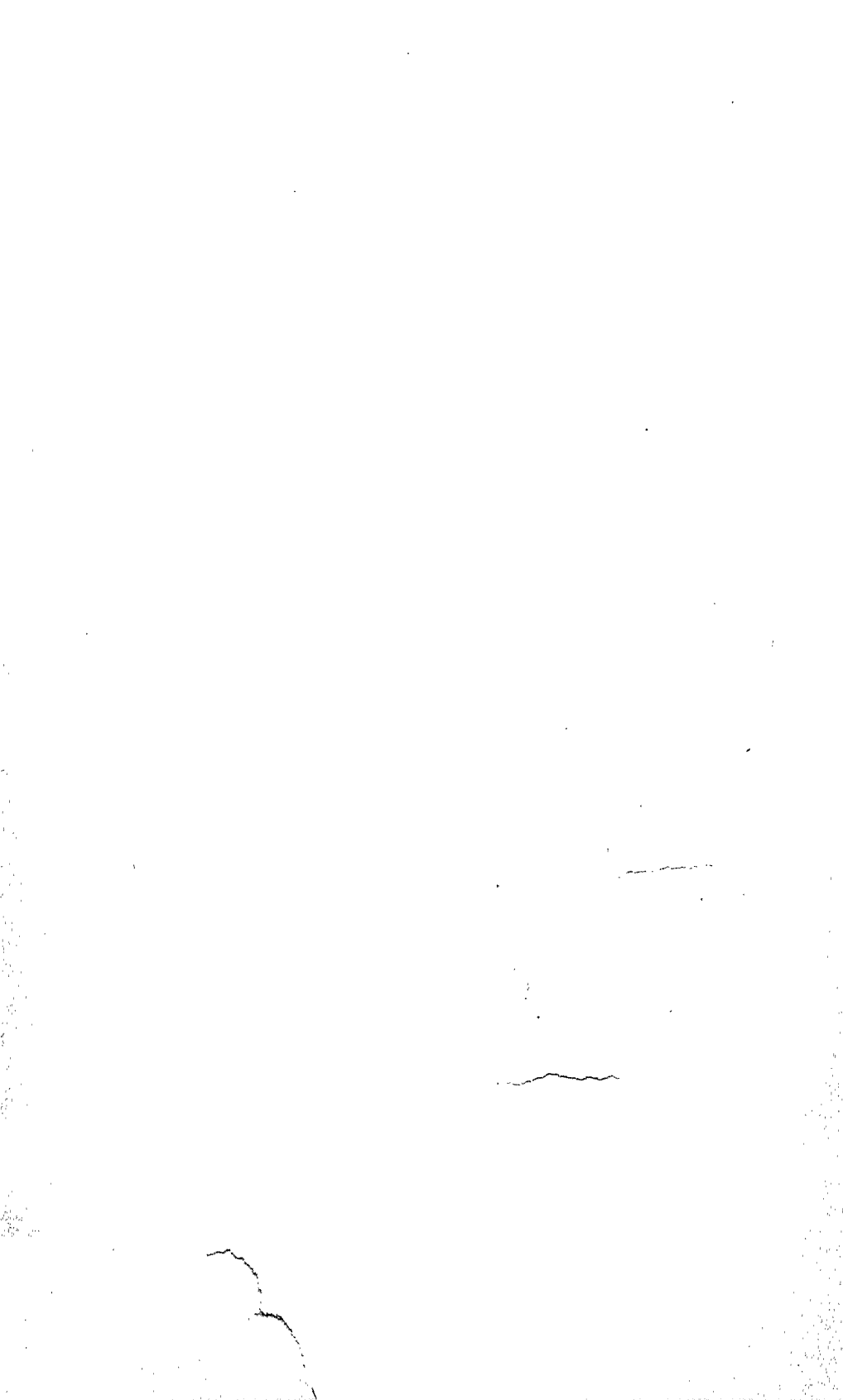
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EDITED BY

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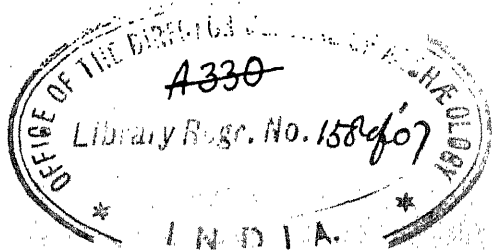
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JOURNAL

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AMERICAN ORIENTAL SOCIETY.

The Pahlavi Text of Yasna ix. 49-103, edited with the collation of all the MSS., also deciphered.—By Rev. LAWRENCE MILLS, D.D., Professor in the University of Oxford.

FOR an account of the MSS. used see the number of the Journal of the R. Asiatic Society for July, 1900, pp. 511-516. I should add here that my collation of M., though very carefully made in 1891, has been subjected to much abrasion through use, while the notes are here added as a merely supernumerary item; they were not originally intended for citation, and should not be considered exhaustive. The attention of searchers is especially called to the fact that the Pahl. trlr. occasionally errs radically, as well as often, in the matter of form. As may be seen from my translation of Y. ix. in S.B.E., xxxi., one especial motive in undertaking this laborious and harassing work has been the desire to destroy the false impression that the authority of the traditional documents is absolute. An exaggerated reliance upon them is nearly as dangerous as the neglect of them. As one fairly said of my former well meant studies on the Gāthas (together with a close reproduction of the original in the light of the critical school), I endeavour to present also the 'Werth und Unwerth der Tradition'; and it is to the last degree necessary that we should neither exaggerate the one nor the other. In the interest of statistics I should say that I have omitted to record

¹ With the exception of one which is a replica. See the introductory remarks cited above.

all the occurrences of final -ō; time, not to say patience, having failed me. I should add that I regard this with regret, as this seeming so trivial mark would be interesting, if we could prove that it represented a letter -ō, or what not. So far, I may say that I fear it is a mere mechanical division mark, occurring without any regular law whatever. It is almost a pity that we could not entirely neglect it. But it is better to retain it for the present; some reason may yet be given for it. It is sometimes used before a termination like the *avagraha*. I had intended to cite the variations as being those from the reading of our Oxford Codex, called D.J. by me in the *Gāthas* first even so far back as 1881, but later called J2; it seemed to me, however, to be rather an ungracious act to avoid placing the edition of our venerable first editor in that position. This is also more convenient for readers, as the printed edition is more accessible than the photographed one; and also reduces the amount of annotation. [This collated edition is an attempt to meet the most crying need in connection with the subject. I have used the old transliteration of the glossaries for practical reasons.]

The Attributes of Haoma.

Y. ix. 49.¹ *shapīr hōm ī hūdehāk*² [*aigh pavan frārūnōih*³ *yehabūnd*⁴ *yekavīmūnih*] *ī rāstō*⁵ *dehāk*⁶ [*aigh*⁶ *mindavam*⁷ *avō*⁸ *valman*⁸ *yehabūnih*⁸ *ī ghal*⁹ *avāyađō*⁹ *yehabūntanō*.¹⁰

(50) *vēh*³ *-dehāk*¹¹ [*aigh mindavam ī shapīr barā yehabūnih*] *ī beshāzīnīđār*¹² [*aigh mindavam ī*¹³ *avō*⁸ *bēshāzīnīh*¹²].

¹ D.J. ins. *va*.

² D. *hūdehāk*, so also Parsi-Pers. MS. *hū-dehāk* (so); K.⁵ M. *-dehak*; Ner. *sudānam*; D.J. *dehak*.

³ So D.J.

⁴ So D.; D.J., etc. *dāđō*, so also the Parsi-Pers. MS.

⁵ So D.J.; D., and the Parsi-Pers. MS.

⁶ D. om *aigh*.

⁷ So D.J., D. *mindavam*; so the Parsi-Pers. MS. with traditional '*mandūm*,' '*mindavam*;' K.⁵ (Sp.) *chīz* (or '*chīsh* for *chīz*' (N. B.)).

⁸ D.J. has *ānō* (or means '*hū*'), with *dehāk* following instead of *dehī*(?); D. may be *ānō*; K.⁵ (Sp.) *valman yehabūnih* Pers. *avō*-translating '*ān ū dehī*.'

⁹ So D.J., D.(?) and Pers. MS.; K.⁵ *valman*.

¹⁰ So D.J., D.

¹¹ So D.(?); D.J. *dehak*.

¹² So D.J., D.; K.⁵ (Sp.) rather full characters.

¹³ D. may ins. I or ī.

(51) hū-kerpō hōmanih [aīghat kerpō nēvak] hū-kāmakō hōmanih¹ [aīghatō² avāyastō² ī³ frārūnō].

(52) pīrūzkar ī zarđō⁴-gūnō⁴ ī narmtāk [aīgh tāk⁵ ī lak narm].

(53) amatatō⁶ vashtamūnd pāhlūmīh avō rūbān⁷ yehabūnih an-bārīktūm⁸ hōmanih, [aīgh anbār ī rūbānō pavan lak shapīr shāy-ađō⁹ karđanō maman garōdmānīkīhīh pavan lak yehevūnād¹⁰].

Appeals.

(54) barā¹¹ lak zarīnō¹² mādīshnō¹³ yemalelūn¹⁴, [mindavam I¹⁵ am ī¹⁶ pavan farāhang yemalelūn aīgham danākīh¹⁷ yehevūnād¹⁸].

(55) barā amāvandīh va¹⁹ barā¹⁹ pīrūzkarīh afam²⁰ yehevūnādō.

(56) barā drūstīh va²¹ barā bēshāzīshnīh.²²

¹ So D.J., D.; K.⁵ (Sp.) may have meant 'haē.'

² So D.J.

³ D.J. ins. ī.

⁴ So M.: D.J. zarīnō va gūnō ī (sic), but the sign for va is probably an oversight. D. has va zarīnō.

⁵ D.J. seems vad (sic); Pers. MS. trls. 'tāk.'

⁶ So D.J.

⁷ So D.

⁸ D.J., D. om. haē, or what it may be. Was it 'gās'?; better call it a repeated 'thou art.' So D.J., D.; K.⁵ (Sp.) bēd.

⁹ One would think that the form in D.J. should be deciphered as khshayađō reproducing an original 'kh;' or else it would seem to be āshayađō (sic); otherwise I should say that it must be irrational.

¹⁰ So D.J., D.; K.⁵ (Sp.) bēd.

¹¹ So D.J., D., and see below for barā; K.⁵ (Sp.) pavan(?).

¹² D.J., D. exaggerate the signs, or ins. va(?).

¹³ D. marks the 'd.'

¹⁴ This mistake evidently arose from the accidental separation of yemalelūn and 'am' for yemalelūnam=mrūvē, see the am after mindavam; it would have been much better before it or both. Ner. was also misled; so the Parsi-Pers. MS. also; all divide and mistake the first sing. pres. for the second sing. imper., plus am = 'to me.'

¹⁵ D.J., D. have mindavam I am.

¹⁶ D.J. om ī; D. has ī.

¹⁷ So D.J., D.

¹⁸ D. -nēd.

¹⁹ D. ins. va barā; D.J., D. om. va or -ō.

²⁰ D.J. (and perhaps D.) afam; K.⁵ (Sp.) am.

²¹ So D.J., D.

²² So D.

(57) barā frādahishnīh¹ va² barā³ vārishn³(?) dahishnīh.

(58) barā aōjō ī harvispō tanō barā farzānakīh ī⁴ harvispō pēsīl⁵ [hōmand amat⁶ farjūn ī mindavam I⁷ khavitūnōdō afash⁸ hamā⁹ dānākīh paḍash¹⁰].

(59) barā min⁵ zak chīgūn dēn gēhānō^{11 & 12} kāmākō¹³-khūḍāī frāz sātūnd va¹⁴ bēsh tarvīnend^{15 & 16} va drūjō¹⁷ vāuēnd¹⁶.

(60) barā min zak chīgūnō tarvīnānī¹⁸ harvispō¹⁹ zak²⁰ bēshī-dārānō²¹ va²² bēsh ī²³ min shedān²⁴ va²⁵ anshūtānō²⁶ [ī²⁷ baḍō²⁷].

¹ So K.⁵ (Sp.), M.; D.J., D. seem frādahanīh (or frādānīh) (sic?); I had first considered vardānō (dahishnīh) as a later form of a causative(?) stem. D.J. has erasures, but seems to have decided for vārishnīh (not vārdānīh); there is no escaping the ā in vār-.

² D. ins. va, or has irrational marks.

³ So I decipher, bringing to light the error (as I hold it to be) of the Pahlavi translator in seeing a form of vār (vṛ) instead of a form of vardh (vṛdh); we might even read varishn-, notwithstanding the sign which represents ā, in vārishn, so in default of better; but the Parsi-Pers. MS. transliterates vārishn and translates accordingly; some have thought of 'vahrishn' (so).

⁴ D.J., D.(?) ins. I.

⁵ D.J. obscured by decay.

⁶ So D.; others mun.

⁷ So D. seems I.

⁸ Mf.? afash.

⁹ So D.J., M.; D. hamāk.

¹⁰ D. defaced.

¹¹ D.J. defaced by decay.

¹² D.J. ins. chīgūn, but seems to have cancelled it.

¹³ So D.

¹⁴ D. ins. va.

¹⁵ So D. tarvīnend(?), D.J. etc. tarvēnd.

¹⁶ There is, of course, the question whether we ought not to read these verbs tarvīnēnī, and vanēnī as first singular conj. imper., in view of the originals (see Ner., who was not misled); but sātūnd seems to call for a decipherment which recognizes the error; otherwise all the forms should be reproduced as first personals.

¹⁷ D.J. bleached out.

¹⁸ So K.³ (Sp.); D.J., D. tarvēnd? or tarvēnī.

¹⁹ So D.J., D. ō.

²⁰ D.J. om. -ō (sic); D. om zakō (some may well desire the statistics as to this still curious -ō; but patience has sometimes failed me).

²¹ So D.J., D. -ō.

²² D. ins. va.

²³ So D. ins. ī.

²⁴ D.J., D. seem redundant.

²⁵ D.J., M. ins. va.

²⁶ So D.J., K.⁵ (Sp.) marḍūmān.

²⁷ So D.J. only.

(61) yātūkānō va parīkān¹ va² sāstārān¹ va kīkān¹ (kayakān, so better) va karpān¹ hōmanǎ kīk (? kayak) va³ karpō¹ [zak mūn pavān mindavam ī⁴ yazadānō kur⁵ va kōr¹].

(62) marich ī dō-zang va³ aharmōkōch ī dō-zang va¹ gūrgieh ī chahār-zang.

(63) hēnōch⁶ ī farākhū-ānīk⁹ [āighshānō⁷ maradō kabad āt mūn aētūnō yemalelūnǎ aē¹⁰ hōmand ānīkshānō farākhūō¹¹] mūn¹² pavan¹² friftārīh patēnd.

Prayer for Boons.

(64) denman mūn lak fratūm yān hōm ī¹³ zaidēm¹³ (or 'zaid-yām' ¹⁴(?)) ī dūrāōsh zak ī pāhlūm ahvānō ī aharūbānō ī rūshanō ī hamūī¹⁵ -hvārīh.

(65) denman mūn lak dađīgar yān¹⁶ hōm ī¹⁷ zaidēm (or '-yam?') ī¹⁸ dūrāōsh dūrūstō¹⁰ rūbisbnīh ī tanō.

(66) denman mūn lak¹⁰ sađīgar yān²⁰ hōm ī²¹ zaidēm (or '-yam?') ī²² dūraōsh dēr zivishūh ī²³ jānō.²⁴

¹ So D.

² So D.J.

³ So D.J., D. ins. va.

⁴ D.J., D. ins. ī.

⁵ So D.J., D. and parsi pers. MS.; others reverse the order, but see Ner.

⁶ So D.J.

⁷ D. has four strokes.

⁸ See the Zend text; D.J., D. have a superfluous stroke. D.J. may well be hāenōch (sic, see the Zend).

⁹ So D.J.; D. seems farākhūō-ānīk(?); K.⁵ (Sp.) farākhūīnīk? (sic), M. I think has Sp. + -ānīk.

¹⁰ D.J., om. aē. so D.J.; M. has it in a different form.

¹¹ So D.J., D. ānīkshān; K.⁵ (Sp.) pēshānīk. D.J. has the preceding hōmand in the margin, but added by the original copyist with the same ink.

¹² D.J. worm-eaten. Notice the freedom of error of patēnd, also followed by Ner. though using a different form; see the Zend.

¹³ D.J. ins. ī. and has zaidēm (or -yam) blotted out purposely(?).

¹⁴ So I think we should decipher in view of the original and the corresponding word in the inscriptions; but the Parsi-Pers. the proper translation as 'khābam.'

¹⁵ So D.J., M.; D. hamāk; K.⁵ (Sp.) hamā(?).

¹⁶ So D.J., D., M.

¹⁷ D.J., M. ins. ī.

¹⁸ D. joins ī to the preceding word, possibly meaning to express a conditional.

¹⁹ D.J. worm-eaten (final -ō, so D.).

²⁰ So D.J., D.

²¹ D.S. ins. ī.

²² D. again joins to the preceding word.

²³ D. varies zīv- with (?) zā(y)-?; D. om. ī.

²⁴ D.J. marks, however, as if it were gānō.

(67) denman min lak tasūm yān¹ hōm zaidēm (or 'yam?') ī² dūrāōsh chīgūnō min khvāstār va³ amāvand va³ padīkhvō frāz⁴ sātūnānī⁵ pavan damīk madam bēsh turvīnānī⁶ va drājō vānēnī⁷ (or read vānānī, see below).

(68) denman min lak panjūm yānō hōm ī⁸ zaidem (or 'yam?') ī⁹ dūrāōsh¹⁰ chīgūn pīrūzkar vānīdār pavan kūshishnō frāzō sātūnānī¹¹ pavan damīk madam¹² bēsh tūrvinānī¹³ va drājō vānēnī.¹⁴

(69) denman min lak shashūm yān hōm zaidem (or 'yam?') ī¹⁵ dūrāōsh aīgh levīnō min dūz¹⁶ va levīnō min gadak¹⁷ va levīnō min gūrg khadītūnām¹⁸ [mādishn¹⁹ chārakō].²⁰

¹ So D.J., M.

² D. again joins. Ner. is better here, apparently referring the word to Indian īṣirā, etc.

³ D.J., D. ins. va.

⁴ So D.J., D.

⁵ So D.J. (corrected from -und at first hand); but it marks 'd' instead of 'i'; this, however, is almost universal with D.J. and the Parsi-Pers.; not so Ner., though, as often, he has sing. for plur.

⁶ D.J., D. again mark 'ēnd; not so Ner.'s original, or if marked 'd' instead of ī in -ānī, then it by no means misled him.

⁷ D.J., M., D. mark -ānd; not so Ner. ⁸ D.J. ins. ī.

⁹ D. again curiously joins to the preceding word; does he really mean zaidēm-ī (or -yam-ī); this must be considered.

¹⁰ D.J. has curiously dīraosha for dūraosha; and in one Zend MSS. K. the sign for long ū and that for long ī are indistinguishable; in fact it is very frequently thus in D.J.?

¹¹ So D.J.; M. D. seems sātūd; and D.J. marks 'd'; not so Ner.'s reading.

¹² D.J., D. om ī.

¹³ But D.J., D. as all other MSS., mark the word with a mark over 'ī,' indicating the false final 'd'; Ner. was not deceived by these mistaken signs (or were they added since his day?).

¹⁴ D. vānēnd; all MSS. again falsely mark a final 'd'; but see the original; Ner. does not, however, err.

¹⁵ D. joins (?) again to the preceding word.

¹⁶ So D. dūz: others zōbā; Parsi-Pers. translating dūzd of course.

¹⁷ So D.; see the original, also Ner.'s 'nṛṇamsebhyaḥ' and the text of the Parsi-Pers. MS. 'gadah.'

¹⁸ So D.J., M.?² K.⁵ (Sp.) khadītūnēm.

¹⁹ So D. and also the Parsi-Pers. MS. translating 'hunar'; others (?) 'mānishn (?)', which seems senseless. At Y. x. 60 the form seems 'mādishnō.' I think the mistake 'mānishn' arose from some Persian text with imperfect diacritical signs, or simply from writing too long a stroke the letter 'd' in 'mād-.' Ner. omits the word here; but see him on Y. x. 60 with vidyām as usual (twice): so the Parsi-Pers. MS. there, translating 'hunar' and reading 'māishn', and not 'mānishn' (?sic).

²⁰ So D.J., D.

(70) al aīgh levīnō khadītūnāḏō¹ levīnō min lanman min harvispōgūn² levīnō khadītūnam¹ [li va hāvishtānō ī li].

The Gifts of Haoma.

(71) hōm valmanashān mūn arrand³ hōmand⁴ ashānō⁵ zak ī farhākhtō⁶ va⁷ tvākhshāk vabdūnyen [sūsyā⁸ afshānō⁹ zavar¹⁰ va¹¹ aōjō khelkūnēḏō¹² [aratēstārānō].

(72) hōm ī¹³ āzātānō ich¹⁴ barā yehabunēḏ¹⁵ zak ī¹⁶ rūshanō¹⁷ benman¹⁸ va¹⁹ zak ī aharūbō farzand.²⁰

(73) hōm valmanshān mūn katik²¹ pavan nask²² frāzō²³ āmūkh-tishnūh yetībūnd [pāvan aērpatistānō²⁴ karḏanō] ashānō²⁴ afzūnī-kīh va²⁵ farzānakīh khelkūnēḏō.]²⁵

¹ So D.J.

² D.J. harvispō. D.J. has the first min written over as doubtful; the correction itself seems later written over.

³ Ner. has ḡastrimantaḥ and aḡvān kshatriyāpām.

⁴ D. 'hōmōnd.'

⁵ So D.J., and it has a cancelled 'pavan.'

⁶ So D. and the indication of the Parsi-Pers. MS. which is, however, strictly in itself considered, erroneous with frāhtan. K.⁵ (Sp.), etc. have a marring stroke.

⁷ So D.J. ins. va. ⁸ So D.J., K.⁵ (Sp.); D. and the Parsi-Pers. MS. aspō.

⁹ So D.J. ¹⁰ So D. and Parsi-Pers. zavar; D.J.. Sp. zavār.

¹¹ Parsi-Pers., D.J., M.? ins. va, or -ō.

¹² So D.J.; Ner. om. here; but ins. 'varshati' below. ¹³ D. ins. ī.

¹⁴ D. seems āzerkhūntānich; so Mf.? the Parsi-Pers., but the latter translates as negative a-zāyandagān (so?); D.J. etc. āzāḏānō.

¹⁵ D.J. ins. va.

¹⁶ D.J. has va zak ārōdishnō, or ārūshānō(?); but I should think this 'ā' was a clerical mistake for the usual ī, and made through haste; but see K.⁵ (Sp.) with which M. probably agrees, as in my careful collation of 1891, I marked no variation; om ī.

¹⁷ So D. rūshan (see Ner.); others ārōdishn (sic).

¹⁸ Or barman.

¹⁹ D.J., D. va.

²⁰ M.? differs from Spiegel having 'fardand' (but intending to report the same meaning).

²¹ D.J. has k-t-k-ik with the second 'k,' or -, struck out(?); not so the Parsi-Pers. Ner. translates ḡrhashtāh reading 'kaḏakik' or 'kaḏak,' as I suppose; the Parsi-Pers. does not translate; see my S.B.E. xxxi. at the place. 'Katik as the katayō at the Pahlavi stage certainly favours a Zend form in the sense 'house-abiding,' 'sitting at home,' and I would now regard my former rendering as the alternative.

²² So D.J.; M.(?) differs from Spiegel; see Ner.'s 'naska-.'

²³ So D.J., though the ō stands apart; it cannot well be 'va.'

²⁴ So D.J.

²⁵ So D.J.

(74) hōm valmanshān mūn kanīkō¹ hōmand va yetībūnd dēr² agript³ [aīgh lā sarītūnd yekavīmūnd] ashān zak ī⁴ āshkūrak⁵ zak ī⁴ rādo⁶ khelkūnēd⁷ [aīgh shānō⁸ shūī barā pēdākīnēd afshānō tīzō⁹ zerkhūnēdō¹⁰ va¹⁰ zak ī¹¹ hūkhiraḏō¹² [hōmand amat avō¹³ gabrā barā pēdākīnīd pavan jīmāk dēn kār yekavīmūnīd].

A Punishment.

(75) hōm valmanshān mūn keresāīk¹⁴ read keresā(n)īk) (omitted nasalization; see keresānīm).

¹ So. D.J., M.

² D.J., D. om ī.

³ D.J. curiously mistakes for aērpāt which has the same characters, and it adds 'istānō'; not so the Parsi-Pers. MS., nor Ner.

⁴ D. om ī.

⁵ So D.J., D.

⁶ So D.

⁷ So D.J.

⁸ So M.

⁹ So D. D.J. is blurred purposely; Ner. strangely enough renders yācayitārah; did he have a blurred MS., and was it D.J.? see his yācāyāmi at 65, etc.=zaidēm (so).

¹⁰ D.J., D. ins. va.

¹¹ D.J., D. ins. ī.

¹² So D.J., D.; D.J. ins. here division mark of the subsection (sic).

¹³ So D.J. avō (to the verb 'avō pēdā-') or ānō=valman; D. om.; some might prefer pēdākīnēd . . . yekavīmūnēd.

¹⁴ I do not well see how we can avoid using the vowel and consonantal signs of the original in a case like this; at least it is convenient so to use them; cp. keresāspō. The Parsi-Pers. MS. has k-r-s-ā-k-ī translating k-r-s-ā-ī; so also D. k-r-i-s-ā-k-ī-k; D.J. seems keresāihikō (sic?) or k-r-s-ā-sh-ī-kō, possibly k-r-sā-ā-īkō, the ā being doubled by mistake. Read M. keresāīk, it has characters for k-r-s-ā-ī-k, so K.⁵ (Sp.) with slightly lengthened 'k'; see the original. The translators at first evidently attempted to transliterate; and their failure may well be due to the omission of a nasal sign in the original word. This nasal, let it be remembered, would be well represented in the Pahlavi merely by a perpendicular stroke. Or else, as so often, the sign of the nasalization has been lost. 'Keresā(n)ī would represent the original word, while the 'k' (or 'īk') is the frequent terminal letter generally possessing adjective, or merely nominal force, and intended only to carry on the ī of the īm. Ner. reports the deeply interesting impression which prevailed among the Parsi-experts of his day that keresā(n)īk and its variants referred to the 'ecclesia'; that is to say, to the 'Christians'; see his tarčākadīnīh; cp. tarsā='christian'; D.J. ins. va or -ō.

hōmand¹ ashānō¹ barā² min khūdāyih nishānēdō³ mūn rōstō (or 'rōdīdō') hōmand¹ pavan khūdāyih-kāmakih⁴ [aigh pavan khūdāyih lātā yātūnd yekavīmūnd].

(76) aigh⁵ mūn gūyēnd aigh lā lanman rāi akhar asravanakō⁶ pavan avar-hōshmurišnih pavan kāmākō dēn matā sātūnd [lanman aētūnō vabdūnānī⁷ min karđō ī lanman yehevūnēdō⁸ amat⁹ la sātūnd⁹].

(77) zak ī harvisp-gūn¹⁰ gūrdīh vānēdō barā harvisp-gūnō¹¹ gūrdīh makhītūnēdō¹² [pēsh¹² pas¹²].

Hail to Haoma.

(78) nēvakō¹³ lak [aigh tanō ī lak nēvak¹⁴ mađō¹⁵ yekavīmūnēd] mūn pavan zak ī nafsman¹⁵ aōjō-kāmak¹⁶ *¹⁷ khūdāi hōmanīh¹⁸ hōm.

¹ D. hōmōnd as often. D.J. has ashānō, or ins. va.

² D. has curiously 'gabrā' for 'barā'; so the pers. MS. also, translating 'mard'; Ner. has nothing analogous.

³ Parsi-Pers. transliterates *nishānēd* and translates *nishēnd*. (barā) min . . . nishānēdō may mean 'restrain from,' 'cause to abate.'

⁴ So K.⁵ (Sp.); D.J., D. pavan khūdāi (not impossible); see Ner.

⁵ So D. ins. aigh here.

⁶ D.J. seems 'asravanak, or asrūōk; why not read so far as possible in analogy with the Zend?

⁷ So I would read D.; others vabdūnam-ī; but D. as it stands is of course 'vabdūnānd; see the variant vabdūnam-ī, K.⁵ (Sp.). Ner. does not render. M.? has vabdūnēm; Mf.? vabdūnānd-ī? (so it seems); Pers. MS. translates 'kunand.' Why not vakhdūnānd?

⁸ So D.J.; K.⁵ (Sp.) bēd.

⁹ D.J. ins.; so also the Parsi-Pers. MS.; K.⁵ (Sp.) has amat . . . -ūnd (so, in fragments); but M. has no space.

¹⁰ So D.J.; M. seems -gun, but not -gūn; D.J. om foregoing ī.

¹¹ D. ins. va or -ō; the 'n' of D.J. is somewhat separated from the ū; which fact bears upon the further question whether he means 'va' in certain places or 'ō.'

¹² So D.J., D. pēsh pas; K.⁵ (Sp.) levīnō akhar.

¹³ So D.J.

¹⁴ D.J., so D. om. ī.

¹⁵ D.J. om kāmāk here; see the Zend text.

¹⁶ N.B. aōjō-kāmak not in M. but in K.⁵ (Sp.); [and yet M. is reported as a copy of K.⁵, the Pahl. trl. not having been examined. It is a modified copy (sic)].

¹⁷ D.J. ins. va or -ō.

¹⁸ D. hōmōnih; D.J. hōmanīh (so).

[aighat aōjō pavan zak kār¹ zakatō² avāyaḏō³*⁴ at tūbānō⁵ dāshtauñ].

(79) nēvak lak mūn dēn khavītūnih⁶ kabled gōbīshnō ī rāstō [ī frārūnō maman⁷ aītō rāstō lā (sic?; read rāī⁸) frārūnō⁹ (kā na vaca arshukhdha¹⁰)].

(80) nēvak lak mūn lā¹¹ frāz¹² min¹³ hampūrsakīh¹⁴ zak ī arē-shūkhtō¹⁴ gōbīshnō va¹⁵ hampūrsak-haē¹⁶ [aigh mindavam lā yemalelūnāī¹⁶ ī aūharmazd dēn hampūrsakīh lā¹⁷ gūftō].

(81) frāz lak zak ī¹⁸ aūharmazd būrdō paravand aīviyāo(ū)g-hanō¹⁹ (not 'aīviyāggishnō' (so?))¹⁹ star pēsīdō ī minavadāu²⁰

¹ D.J. irreg. character for 'ā' one stroke too much; it may be accidental.

² So D.J.

³ D.J. may mean (?) zītō; this zītō (?) would be written much like zakat as sometimes written.

⁴ D. ins. va or -ō.

⁵ D. tubān; D.J., D. om. Sp.'s ī.

⁶ D.J. dānāk, om. aē or -ih, K.⁵ (Sp.) khavītūnih; D. seems khavītūn with a separated '-ih.'

⁷ D.J., D. manan; K.⁵ (Sp.) mūn.

⁸ Ner.'s yena saves the sentence from the senseless lā; so the MSS. should be read rāī, or otherwise relieved and discounted (the Parsi-Pers. MS. also has 'lā'='nah.'). D. may insert ī before lā.

⁹ M. -ōk; others frārūnō.

¹⁰ D.J. arshukhdha; Zend characters within the brackets.

¹¹ D.J. om. min here, ins. after frāz.

¹² I think frāz was erroneously motivated by 'pairi,' yet Ner. seems to have understood frāz min as equalling rē.

¹³ D.J., D., M. (N.B.) have ham(pūrsakīh), and so the Pers. MS. translates at least. Spiegel alone has pūrsakīh; but see Ner.; this trifle shows that M. is not a rigidly exact transcript of K.⁵ according to Spiegel. D.J.'s ih is not clear, but over-written; looks like -ih.

¹⁴ But for the original Zend text I should emend to arsh-; the word seems to be a hybrid; D.J. adds gās. or -ihā.

¹⁵ ihā as pl.(?) and as adverbial seem each to be suspicious. On the other hand, to see a fully conscious 2d sg. pursīyāih (so, or yāē?) is doubtful as immediately following the hampūrsakīh. The most prudent view is to see a Pāzand haē. 'Thou wouldst be of a truthful speech and questioning'; D.J. om. the va before it.

¹⁶ So M., or -ih; others -ih.

¹⁷ D. erroneously rāī.

¹⁸ D. om. ī.

¹⁹ So D. ins. (?); evidently an attempt at a transliteration; the 'o' of aīviyāo- is in Persian form somewhat similar to Persian ō, or ū, otherwise read -yākgānōih (sic). Ner. reads the same text, attempting only a transliteration aīvianghanatām (S. reading aīvi-), though he translates aīviyāstō in 82 as āvēštīh; the reading is needed; see the Zend text. The Parsi-Pers. translates (?), or imitates ēvāngan; while at 82 it refrains from the translation of the related word.

²⁰ So D.J.

takhshīdō¹ shapīr² dēnō ī ma(zda)yastānō³ [afash aīviyā(ūg)han-ōih (sic)⁴ hanā aīgh chīgūnō kūstik levatman gabrū khadū-karḍakō⁵ dēnōich ī levatman hōm aētūnō⁶ khadū-karḍak afash khadū-karḍakōih⁷ aītō⁸ hanā⁹ aīgh vad hōm lā vashtamūnōdō¹⁰ pavan dēnō astūbānō lā yehevūnōdō hōm¹¹ vashtamūnōdō kār dēn (ā)yazishn¹²].

(82) pavan zak hōmanyih¹³ aīviyāstō¹⁴ pavan bālistō maḍam ī¹⁵ girānō [aīmat tamman rōsto¹⁶ yekavīmūnih afatō¹⁷ denman khadū-karḍakīh aētūnō¹⁸ vad avō zak ī dirāz maḍam sātūnishnīh [vad tanō ī pasīnō yekavīmūnih] pavan mānsar¹⁹ [aīghat dēn yazishnō²⁰ kār ghal farmāyēnd²⁰].

¹ Others might prefer 'tāshīdō' or 'tukhsīdō'; D.J. has a superfluous sign which is, I think, accidental.

² So D.J., D.; others vēh.

³ So D.J. seems. I have little doubt but that mā (sic) is for 'mazd,' as the same 'ma' is in aūharma(zd).

⁴ So D.; the Parsi-Pers. MS. transliterates biyākgāni (so here), meaning and explaining ēvāngan (thus approximately). while just above it seems to have aēbiyākgān translated again by evāngan. D.J. has superfluous signs for the first 'ī.' 'aīyv-' (?).

⁵ So D. D.J. has a superfluous and accidental mark between 'k' and 'ar' in karḍak.

⁶ D. ins. aētūnō; or is it a later interpolation?

⁷ D. ins. aītō.

⁸ D. hanā; others aē.

⁹ D., Mf. om. mū in the middle of the word.

¹⁰ D.J. has a word struck out (not Spiegel's form); ins. vashtamūnōdō; D. has an abortive word as above for vashtamūnōdō, or it may mean hom shedūtō kār dēn āyazishn; but there are no signs of shedūtō or yātūnōdō in Ner.; D.J. hōm vashtamūnōdō kār dēn yazishn.

¹¹ D. seems āyazishnō, D.J. yazishnō; but space seems left.

¹² D. hōmōnih; M. may be hōmanyih; so D.J.

¹³ aīviyāksto (sic), again, or is the 'k' Persian ō (similar sign), see on 81? Strange to say, D.J. has the same thing, and the Parsi-Pers. MS. as well. Is it the suffix -k which, like the -ō, has found its way into the interior of the word as a sign of the division of syllables?; cp. the avagraha. As -k appears in vohū -k even at the end of a word, it may here appear at the end of a syllable? or again, can it point to a suspected form of yūj, 'to yoke on?' or is it the sign merely of an echo of the 'ng' in 81?

¹⁴ D. ins. ī.

¹⁵ Or rōdīdō (?)

¹⁶ So D.J. afatō.

¹⁷ D.J., D. have aētūn; so Parsi-Pers. MS.; Sp. ait.

¹⁸ Or mānthar (?)

¹⁹ Mf. again āyazishn.

²⁰ So D.J.; M. seems farāyēnd (?), i. e. om. 'm,' (?) accidental; Ner. gives no sign of this; and the Parsi-Pers. has farmāyēnd (so).

(83) hōm mūn mānpat¹ hōmanih² mūn vīspat³ hōmanih vā⁴ mūn zandpatō⁵ hōmanih va dahyūpat⁶ hōmanih² [aīghat mīna-vadīhā hamāk⁷ patīh] va⁸ afzūnikīh va ākāspatō⁹ hōmanih² [aīghatō¹⁰ barā tūbānō¹¹ yehabūntanō¹²].

Deprecations.

(84) amāvandīh ī¹³ lak va¹⁴ pīrūzkarīh avō denman ī¹⁵ li tanō ī¹⁶ madam pavan afrīnō¹⁷ va¹⁷ padīklvīhīh ī¹⁶ pūrūbazishnīh¹⁸ [khvāstak ī¹⁹ mūn nōvakīh ī²⁰ kabad azash].

(85) barā min zak ī lanman²¹ bēshīdārānō bēsh va²² barā mīn-ishnō²³ barāich yedrūnānīd²⁴ ī²⁵ girān²⁶ mān²⁶ [khūḍāyīh].

¹ So D.J., D.; K.⁵ (Sp.) mānpatān, so also the Parsi-Pers. here.

² D. hōmōnih.

³ So D.J.; K.⁵ (Sp.) -patānō; M. might be vīshpatān (so).

⁴ D.J. ins. va.

⁵ So D.J. zandpat but mechanically divided 'zand pat' (sic.); others zandpatān; not so Ner.'s orig.

⁶ D. might be dahyūpat (?); M. dahyūpatān (sic).

⁷ So D., M.; D.J. hamāī (but I much question whether the stroke for 'ī' in hamāī may not, as a similar one elsewhere, represent a 'k'); Sp. hamā(?).

⁸ D.J. ins. va.

⁹ D.J., D. ākāspatō hōmanih; others -patō haē or haīh (sic?) (?); (or is it possibly ? ākāspatō-ihā, K.⁵ (Sp.) ? Ner. does not corroborate the plurals, nor does the Parsi-Pers. MS.

¹⁰ So D.J.

¹¹ D.J. has curiously two dots over and a little before the character for 't' in tūbānō.

¹² D. yehābūnd; others yehābūntanō.

¹³ D.J. ins. ī.

¹⁴ D.J. ins. va. ¹⁵ D.J. om. ī. ¹⁶ D.J. ins. ī. ¹⁷ So D.J., D.

¹⁸ So D.J. alone (?); the translation of the Pers. does not show -ih.

¹⁹ D.J. ins. ī.

²⁰ D.J., D. ins. ī.

²¹ D.J. om the zak ī. This lanman corrects D.J.'s noīd (sic), and notice well that the ancient copyist has just written Zend noīd with the last stroke of his pen; yet here is the correcting 'lanman.' D.J. meant nō (=from us) + iḍ (?).

²² M. (?) ins. va.

²³ So D.J. mīnishnō barā ich, and D.J. om. ī. after Sp.'s mīnishnō ich.

²⁴ So D.J.; K.⁵ (Sp.) dedrūnyēn.

²⁵ Mf. seems to insert (?) a needed ī; it may, however, belong below; but we should not hesitate to supply one in such a case.

²⁶ D., M. girān; K.⁵ (Sp.) garēn-. Have we here a transliteration, or have we here a translation, as Ner. will have it? Perhaps 'Bear away the thought which is the abode of severe affliction (the Kingdom).' This should imply an interesting blunder arising undoubtedly from the

(86) mūn dēn denman mihanō (or 'mānō') mūn dēn denman
vīs va' mūn den denman zand va' mūn dēn denman matā kīnik
hōmanād³ anshūtā⁴ ī vināskār.

(87) vakhdūnih zak⁶ i valman⁶ ragelman⁶ zavar.⁷

(88) barā zak ī ānō⁸ hūsh vardīnō.¹⁰

(89) ¹¹ tebrūnak¹² (or 'tebrūnō') zak i valman mīnishnō vab-
dūnō¹³ [akārash barā vabdūnānd].

usual mechanical cause. An approximate transliteration of the Zend
garemañtem would be garā(n)mān, so about. The nasalization (n)
arises from the division; perhaps it is the usual 'ō' and not 'n' (same
character); for the termination of the word had evidently become sepa-
rated from its base, occasioning the separate translation which Ner.
gives with vāsayatām, see mān. The Parsi-Pers. MS., however, merely
repeats garānman (so) in its translation line. Perhaps both the Pahl.
trlr. and Ner. felt the figurative force of 'garm,' though they mistook
the termination. The thorough discussion of such errors on the part of
one or more of the translators at one place casts light upon their cor-
rectness in another; and also warns us against that indiscriminate
dependence upon the translators which has been so fatal in some cases.

¹ D. (?) ins. va.

² D.J. ins. va.

³ Mf. hōmōnād.

⁴ So K.⁵ (Sp.), and others; D.J. anshutānō, but see the Zend, Ner.'s
reading and the Parsi-Pers. trlr. adāmī.

⁵ So D.J., D. (D. marking 'd'); K.⁵ (? Sp.) seems difficult; Ner. is plain
with gṛhāna; but the Parsi mistakes with 'kuni,' so for vabdūnih,
transliterating vādūnī.

⁶ D. om. zak i; D.J. has zak cancelled; D. ins. i after valman. D.J.
has a zak written over ragelman, the ink looks darker, but the hand-
writing is the same.

⁷ D.; so the Pers. MS. translates at least zavar; others zavār (so).

⁸ D.J. om. ī.

⁹ So D.J. barā zak ānō (avō?) hūsh vardīnēd in margin, but original;
K.⁵ (Sp.) valman.

¹⁰ So D.J., D.; K.⁵ (? Sp.) difficult Parsi-Pers. MS. vardīn translated
gardīn; Ner. parivartaya 'turn around,' not more correct, but inter-
esting. The translators hit upon vart (vṛt) rather than var (vṛ) in con-
sequence of the 'dh' in verenuidhi (sic).

¹¹ D.J. or M. om. va, or first stroke.

¹² M. ? reads tebrūn; so the Parsi-Pers. has long ū, but curiously a
tablūn (sic, hardly 'atlabūn' (so) as it seems), possibly the 'u' of
tebrunak (so) should be left short in view of the termination. D.J.
by a slip of the pen has t-b-n-(u?)-r-k for t-b-r-n-(?)-k; he can hardly
mean tabr-lak 'destroy thou.' There is no reason why Spiegel's repro-
duction of K.⁵ 'tabrak' (so) should not be possible; yet as we have
the verb-form 'tebrūnastanō,' 'tebrūn,' is natural, '-ak' being as usual
the adj. (-noun) termination often loosely applied.

¹³ So Mf. seems.

(90) al pavan kolā II (dō) zbār frāz patūkō¹ hōmanāḍō² al pavan kolā II (dō) gavaē madam tūbānīk³ hōmanāḍō² [aīgash pavan yadman vīnās kardānō al tūbān yehevūnāḍ].⁴

(91) al damīk khadītūnāḍ⁵ pavan kolā II (dō) ash⁶ al gōspend khadītūnāḍ pavan kolā II (dō) ashash.⁷

(92) mūnḍkīnīk hōmānāḍ⁸ avō zak ī lanman mīnīshnō [aīgah vad mānō⁹ mindāvam ī¹⁰ frārūnō mīnīḍanō¹¹ al tūbānō yehevūnāḍō¹² mūn kīnīk hōmanāḍ¹³] avō zak ī¹⁴ lanman kerpō, [aīgah levatman kerpō¹⁵ ī¹⁶ lanman kīnō yakhsenuḍ].¹⁷

Anathemas.

(93) barā azō¹⁸ ī zardō ī¹⁹ sahmḡūn²⁰ ī²¹ vish barā āyāftō [mūn ash vish avō tanō barā āyāftō²² yekavīmūnēḍō²³].

¹ D. ins. -ō, or va.

² D.J. adds -ō; D. reads yehevūnēḍ (?), or -nāḍ (?); D.J. has a cancelled pav-.

³ D. tūbān (?).

⁴ yehevūnēḍ (?) or -nāḍ (?).

⁵ D. khadītūnēḍ (?).

⁶ D.J., D. om. va.

⁷ So D.J.; others ash.

⁸ D. hōmand (?); D.J. hōmanāḍ.

⁹ So D.J. mānō; D. mān.

¹⁰ D.J., D. ins. ī.

¹¹ So D.J., D.

¹² So D.J., D. hōmand (?); and D.J., D. ins. va, or -ō.

¹³ D. -nēḍ.

¹⁴ D.J. ins. ī.

¹⁵ So D.; D.J. has kerpīh with the -ih apart; so three words before possibly, though the sign is confused, looking more like an -ō or a careless ī.

¹⁶ So D.

¹⁷ D. -nēḍ(?).

¹⁸ So D.J., D.

¹⁹ D.J. om. ī.

²⁰ So D.J. and Pers. MS.; K.⁸ (Sp.) etc. D.J. has the usual sign for 'k' which may, however, well render 'g'; the Parsi-Pers. MS. seems sahmḡūn, hardly 'simakḡūn'; so D. distinctly simakḡūn.

²¹ M. seems to introduce a 'k' or 'g', though the character is more probably meant for the 'v' of 'vish'; but if so it is in the Persian form and also misplaced; otherwise I cannot explain it, as 'v' would be expressed twice. The Parsi-Pers. is not very clear, but shows signs of long ī; its translation is, however, plain as zahīr (so for zahar?).

²² So Mf.

²³ So D.J.

(94) amat kerpō¹ yezrūnānd² avō valman ī³ aharūbō ī hōm ī zarīnō va⁴ ash⁵ pēdākīnih⁶ zanishnō [aigash chārakō⁷ barā yemalelūnō].

(95) barā gadakō⁷ ī⁷ javīdō varzīdar [mūn javīdar varzēdō⁴ aīgh⁸ zak ī⁹ ghal⁹ avāyadō¹⁰ varzīdanō] ī¹¹ khrūkō-bavihūnō¹² [aīgh, rēsh¹³ vabdūnyēn¹⁴] āzārdār barā¹⁵ yemalelūn.

¹ So D.J.

² So D.J., Mf.; others -nād; so D.J. I should say that the word was a variant for yezderūnānīd 'may they drag.' Unless a meaning closely allied to Ner.'s vināçayati is given to this word, it is, of course, an error which mars the section. The 'dragging of the corpse' may be the idea; cp. Vendidad.

³ So D.

⁴ So D.J., D.

⁵ Obliterated in D.J.

⁶ M. may be pēdōk-? or 'pēdō-'; not so the Parsi-Pers. MS.

⁷ D.J. om. ī; not so M.

⁸ aīgh='than,' or 'more than,' or different from.' Here we have another exceedingly important case to prove how the last Pahlavi copyists unconsciously preserved Zend texts different from those which they had just mechanically transcribed in the MSS. which contain both Zend and Pahlavi. The last copyist here wrote a vīveredvatō, either by oversight, originating the blunder (see some other MSS.), or following some predecessor; but his Pahlavi translation text (also mechanically copied) restores the correct reading with -varz- to vīverez-; the translation being impossible for vīvered-; we might even correct to vīverezvatō, (so?) on the strength of this varzīdar. I do not think that the 'd' is organic.

⁹ So D.

¹⁰ So D.J.; M. ins. va or -ō.

¹¹ D.J. om. ī.

¹² Corrected, D. and the Parsi-Pers. khūr-k (for khrūk)-bavihūnō. D. divides khūr-k(ō); but that is immaterial. The text is partially transliterated, and the sibilant treated as a form of ish, so with sevištō; (see note on Y. ix. 80, July number of the Journal of the R. Asiatic Soc., 1900); 'khrūk' (so) would be quite legitimate as expressing the root of khrvishyatō, we might even read khruvak, so, in fact, better.

The 'k' is again the frequent loosely applied letter. D. and the Parsi-Pers. MS. show the closest attempt, and as such give us the important reading bavihūn='ish,' i. e. khūr-(k)-bavihūn. Although the latter word is mistaken, it gives us the fair rendering, 'desiring blood,' or 'prone to cruelty.' D.J.'s text is difficult of explanation in view of 'ish' in the Zend text and bavihūn in D. The nearest seems basīm: khrūk-basīm 'having pleasure in cruelty,' but the letters represent 'basīnō'; it must be a mere blunder for bavihūn (we are reminded of bisrayā?)

¹³ D. exaggerates the sign for 'ē' till it looks like that for 'k' or 'g,' or Persian 'u,' 'v.'

¹⁴ D.J. ins. va or -ō (so).

¹⁵ D. ins. barā; D.J. ins. va.

(96) mūn kerpō yezrūnāḍ avō valman aharūbō hōm ī¹ zarīnō² ash pēḍākīnīh zanīshnō [aīgash chārak barā³ yemalelūn].

(97) barū anshūtā ī⁴ darvand ī⁴ sāstār⁶ mūn madam andahīshnō (andāshnō (?), read andāzīshnō for andazīshnō⁶) dāḍ⁷ yekavī-mūnōḍ⁸ [mūn aīshānō padash andahīshn (sic ?) andāshn (?)⁹ read andāzīshn⁹ (or 'andāzēḍ' (?)⁹ or both) andāzīshn andāzēḍ].

(98) amat kerpō yezrūnāḍ avō valman ī¹⁰ aharūbō¹¹ hōm¹¹ hōm ī aharūbō hōm ī¹² zarīnō vāsh¹³ pēḍākīnīh¹⁴ zanīh [aīgash chārak barā yemalelūnō¹⁵].

(99) barū aharmōkō¹⁶ *¹⁷ ī anaharūbō ī ahyān merenchmīḍār¹⁸ aērpato¹⁹ va dastōbar mūn mīnīshnō va²⁰ gōbīshnō yehabūnēḍō²¹

¹ Mf.? om. ī (so).

² D.J. ins. va.

³ D.J., D. and Pers. MS. ins. barā.

⁴ D. ins. ī.

⁵ D.J., D. and Pers. MSS. om. avō, or the -ānō of a false pl ; D.J. (or M.) seems sūstār ī (?); D.J. has ī before sūstār.

⁶ These signs must be meant for an 'andazīshn' to correspond to the 'andāzīshn' of 'andākhtanō.' It seems hardly fair to read the signs andāshan (sic) as they stand, though the meaning 'a casting' seems certain ; cp. also new Persian andākhtan and andāza = 'throwing.' Or is the 'ā' of andāshan (sic) as in the case of 'aūharma(zd) and of the sign in 'yazadan,' here also = 'az' in auharmazd 'az' + 'd' ? ; giving us 'andazīshn' for andāzīshn ? The Parsi-Pers. has andashn (for andahīshn : see below). The Parsi-Pers. has (see below ⁹) 'andahīshn anda-hēḍ (sic)' (so Mf.?) with no translation ; D. marks the 'd.'

One might think of an aōshīshn as a solution for the word. but the first occurrence must mean, 'hurling,' and be related to the Pers. 'andākhtan.'

⁷ So D.J. and the Parsi-Pers. 'dāḍ ;' others yehabūnḍ.

⁸ No vacant space in M. ; D.J. has -ō.

⁹ D. andāshn (?), or 'andahīshno', sic for andazīshn (andāzīshn). D.J. has the characters andahēḍ (sic) ; but means, I think, andazēḍ for andāzēḍ.

¹⁰ D. ins. ī ; D.J. decayed. ¹¹ D.J., M. ins. an additional hōm here.

¹² D. ins. hōm ī here ; the Parsi-Pers. om. ; D.J. is decayed here.

¹³ D.J., D. and Parsi-Pers. ins. va : va-ash, written vāsh in D.J.

¹⁴ So M. (N.B.) ; D.J. and others zanīshnō ; so Spiegel (not as M.).

¹⁵ D. has -lūnō, which, however, needs notice only for the statistician, or special questioner as to the curious character which is reproduced as -ō.

¹⁶ So D.J., D. -kō.

¹⁷ D.J., D. ins. ī, and M. seems irregular, differing again from Spiegel ; seems ānō ī aharūbō.

¹⁸ D.J., D. have no vacant space here ; nor has M.

¹⁹ So D.J., D.

²⁰ D.J., D. ins. va ; not so the Pers. MS.

²¹ D. om. -ō (sic), but D.J. ins. va.

va lā pavan kūnishnō barā ayāfāt¹ [aighash kardakō² lā yehēvū-nēdō³ minēd va⁴ yemalelūnēdō⁵ aigh vabdūnam⁶ va⁷ lā vab-dūnyēn].

(100) mūn kerpō yezrūnād avō valman ī⁸ aharūbō^{8a} hōm^{8a} zar-inō vāsh⁹ pēdākīnīh zanīh¹⁰ [aighash¹¹ chārakō barā yemalelūn¹²].

(101) barā jēh I¹³ I¹⁴ yātūkō¹⁵ va¹⁶ mūdākō¹⁷-kardār.¹⁷

[aigh mindavam¹⁸ tapāh] vabdūnyēn madam panāhīh¹⁹ būrdār [aigh panāhīh vinās-kārūnō vabdūnyēn] mūn valman²⁰ rāi²⁰ mīn-ishmō frāzō²¹ fravinēdō²¹ chīgūn abr mūn vātō-shūōk-gūn²² 'so; or read shūtāk-gūn).

¹ D.J. ayāfēd (?); so the Parsi-Pers. (?).

² D. seems kirkakō (so), and also the Pers. MS.; but Ner. gives no sign: D. ins. ī before lā.

³ D.J.

⁴ D.? ins. va.

⁵ Mf. (?)

⁶ D.J., vabdūnam; so M. and D.(?) and the Parsi-Pers.; om. Sp. mūn.

⁷ So K.⁵ (Sp.) in the erroneous mūn.

⁸ D. ? ins. ī, and D.J. ins. ī after aharūbō. ^{8a} D.J. om. ī after hōm; M.? ins.

⁹ D. ash., om. v-.

¹⁰ So M. (N. B.) zanīh; not zanishn: D.J. and others zanishnō.

¹¹ D.J., D. aighash; K.⁵ (Sp.) om. ash.

¹² So D.J.

¹³ So D.J., D. seem; K.⁵ (? Sp.) would seem jēhō (?) ī, but D.J. ins. a 'va,' Sp.'s apparent -ō may be va. We may suspect D.J. to be jēh-I; is it jehīh?

¹⁴ D.J. om. ī, but may have 'va,' but D. seems 'jeh-I ī.'

¹⁵ So D.J., D.

¹⁶ D.J., D. 'va' for 'ī.'

¹⁷ So D.J., D. according to the gloss, which, however, may have been later and erroneous; see Ner.'s 'mandatvam,' the gloss being brought into harmony by the negative. Following this, we should understand the form to be a correct Pahlavi reproduction for the root-form of the Zend word 'maodhanō.' In that case we might introduce a 'lā' on the authority of Ner.'s 'na'; but it is the more rational to accept the Pahlavi word in an evil sense just here, like its original: see the second gl. The Pers. MS. translates kharāb-kardār; and the Pahlavi Pazand Gl. understands the same.

¹⁸ D.J. seems mindavamich or -af (?); was it an awkward mindavam-I, so D.J. might seem to some to be tapāh -I.

¹⁹ D. om. ī.

²⁰ So D.; D.J., K.⁵ (Sp.) ānō or avō, om. rāi.

²¹ So M. and D.J., D; D.J. also ins. va(?). Spiegel's form pūhal seems improbable in view of the original text; see also Ner. who gives no sign in that direction; the Parsi-Pers. has frāz pravinēd (text).

²² One might restore this shattered word on the model of Y. xix. 8, and the original Zend, as shūtāk-gūn; Ner.'s 'sāritam' shows that a Pahlavi form of the Zend word must be meant. Strictly the word at

(102) mūn amatō¹ kerpō yazrūnāḍō avō² valman aharūbō hōm ī zarīnō³ ash⁴ pēḍākīnih zanishnō⁵ [aigh ash⁴ chārak⁵ barā yemalelūn].

(103) amat min⁶ valmanshān kerpō barā⁷ yezrūnāḍ⁸ avō valman ī⁹ aharūbō hōm ī zarīnō¹⁰ ash pēḍākīnih zanishnō, [aigh chārakō¹¹ barā yemalelūn¹²].

Y. xix. 8 is 'sūtak,' so the Pers. MS., but the Pahl. letter for *s* sometimes replaces one for *sh*. D.J. has what might be deciphered 'va shūōk-gūn' (or -kinō (? sic), see shūtem; but with a consonant labial we should read va shavōk-gūn; D. has va savōdō- (sic) vid? or sūōdō), the 'd' marked for savōkō; Mf. seems sūōkō- (sic) or savōkō- (sic). The Parsi-Pers. has vātō sūī. Aside from the original, one might read the MS. shudī. It translates bād sūī. All obviously aim to imitate the shūtem of the original.

¹ So D.J., D., and Parsi-Pers. MS.

² D. om. avō; not so the Parsi-Pers. MS.

³ D.J. ins. va (or -ō (?)); D. om.

⁴ So D.; D.J. seems to ins. va before pēḍ-.

⁵ So D.J.

⁶ D. om. 'min valmanshān'; Ner. has asya.

⁷ D. ins. barā after kerpō; Pers. MS. has zak in its Pahl. text; om. the rest.

⁸ Mf.? has avō; D. om. ī; see the other places.

⁹ D. ins. ī.

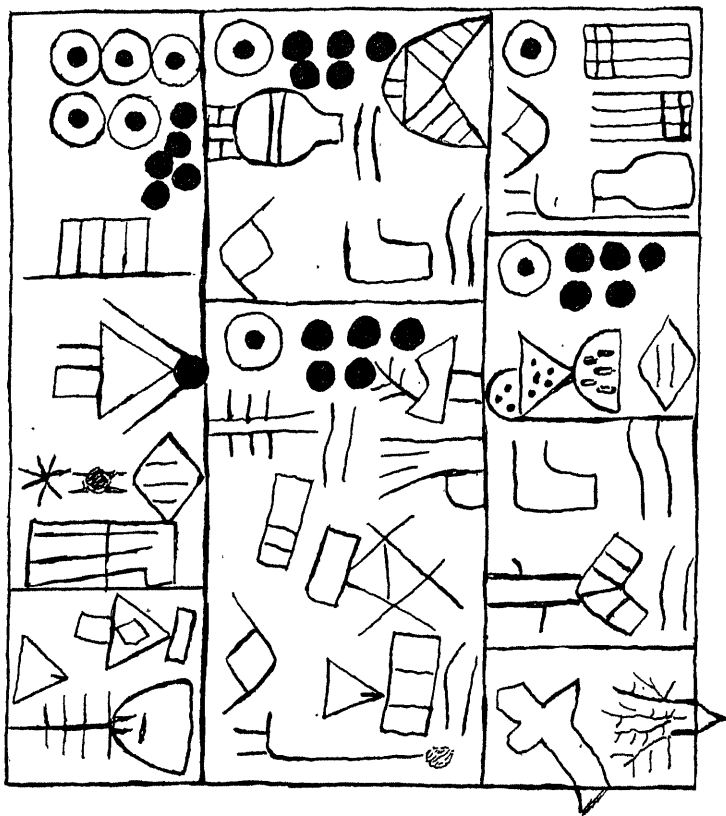
¹⁰ D. om. v- of vāsh, or 'vash.'

¹¹ So D.

¹² D.J. does not report this needless 103.

The Text of an Archaic Tablet in the E. A. Hoffman Collection.—By ELLEN SETON OGDEN, of New York.

IN the spring of 1901, while a student in Semitics at Bryn Mawr College, my attention was called by a footnote in Dr. Radau's¹ book, to a very archaic Babylonian tablet in the E. A. Hoffman collection in the General Theological Seminary, New



York City. By the kind permission of the Dean, the Very Rev. E. A. Hoffman, a copy was made; and as subsequent study

¹ Rev. Hugo Radau; *Early Babylonian History*, p. 12, note 1, and Appendix, p. 321.

of the inscription has shown it to be of exceptional antiquity and interest, the accompanying text is offered as a small contribution to the material for this period.

The tablet, which, with five others, was purchased in 1898 by Dean Hoffman, in Paris, and which forms part of a larger collection obtained in 1896, is of smooth black stone, $3\frac{5}{8}$ by $3\frac{1}{2}$ in. in size, with convex sides, sloping from $1\frac{1}{8}$ in. at the center to $\frac{3}{8}$ on the flat edges. The signs are clearly and strongly cut and the tablet itself in a perfect state of preservation. In the lower right hand case the bases of the signs are carried down over the edges, as though there were not room above.

Interpretation of the Archaic Tablet of the E. A. Hoffman Collection.—By GEORGE A. BARTON, Professor in Bryn Mawr College, Bryn Mawr, Penna.

MY attention was first called to this tablet near the close of the year 1900. While making a study of the archaic inscriptions which had been published, I noticed the statement concerning this tablet in Radau's *Early Babylonian History*.¹ It was evident that Radau had not read the tablet. Later, one of my pupils, Miss Ellen Seton Ogden, through the courtesy of the authorities of the Seminary, secured a copy, and we made considerable progress in its interpretation. In September of the present year I was permitted to collate the tablet again. This enabled me to obtain a clearer impression of some of its most peculiar signs, and to establish the fact that at the bottom of Col. II, a circle like the figure 10 had been cut by mistake and erased.

Further study of the tablet has made it evident that it is almost identical with a tablet in Paris which is yet unpublished, but which Thureau-Dangin mentions in the preface to the *Supplément* of his *Récherches sur l'origine de l'écriture cunéiforme*, designating it as γ , and many of the signs of which he cites in the table which follows. When these signs and their location on tablet γ are examined, they correspond to the signs of our tablet, column for column and line for line. When this *Supplément* was published, in 1899, Thureau-Dangin had not identified all these signs.

In interpreting the tablet I have worked from the starting point furnished by the numbers. It is evident that the first of these gives the area of a field, and probable that those which follow give the dimensions of its various sides. This supposition has proved correct. The tablet so far yielded up its meaning that I gave a tentative transliteration and translation of it in my *Sketch of Semitic Origins*.² The tablet itself is of such

¹ Radau's *Early Babylonian History*, p. 12 n. and p. 321.

² P. 213 n. 5.



interest to Babylonian palaeography as well as to history that I venture to publish my version of it in connection with Miss Ogden's text, and to call attention to some of its most important palaeographical contributions to our knowledge. Unfortunately, the sign which designates the locality from which it comes I am unable to identify. The writing shows the document to be older than the Blau monuments, but later than the archaic inscriptions published last year by Father Scheil in his *Textes élamites-sémitiques* and the *Recueil de travaux*.^{*} Transcribed into the later Assyrian character it appears as on the opposite page.

It reads thus:



- I. 1. HIMV GANA DUK¹-KA² DINGIR ?³ KI' LAG⁵
 2. SAL-LAL⁶-TUR⁷
 II. 1. HIMVICL URI⁸-NI-A SIG LIK⁹-A
 2. HIMVICL GAL PI NER-A DA¹⁰-KU GUR DIM-
 MENA BABBAR NIN-A TAB BAR¹¹ (UMUN)
 III. 1. HIMVIC E BABBAR LUĞ AB TAB BAR
 2. HIMVICL IGI¹² KUR IR¹³ DU¹⁴ BAD LIK-A
 GAR¹⁵-A
 3. GIR¹⁶ ŠAG¹⁷.

I. e., I. 1. "3005 Bur of a field of clay, to the god ? presented
 2. Sallatur. II. 1. 36050 cubits on its Akkadward side, the
 lower (side), from the beginning; 2. 36050 cubits running along
 the breadth of the ziggurat of Shamash, the lady who pours
 forth brightness; III. 1. 36000 cubits (to) the temple of Sha-
 mash, the messenger of Ab, who pours forth brightness, (i. e.
 Sin); 2. 36050 cubits before the mountain unto the abode of
 Ishtar (?), to the beginning; for making brick. 3. May he give
 strength, may he bless."









NOTES.

¹ This sign, written , was identified by Thureau-Dangin, *Supplément*, No. 379^{bis}. It is clearly a simple picture of an antique clay pot, originally in an upright position () , similar to that which is pictured twice in the archaic inscription published by Father Scheil in his *Textes élamites-sémitiques*, p. 130, and in the *Recueil de travaux*,

^{*} One of them was repeated in the *Journal of the American Oriental Society*, xxii, 126 ff.

vol. xxii, p. 149 ff., and which I reproduced in *JAOS.*, vol. xxii, p. 126 ff. Ball, *PSBA.*, vol. xiii, p. 374, had conjectured from the form which this sign assumes in the inscriptions of Gudea, that it was composed of two elements, , a vessel, and , water. That view is now no longer defensible.





The sign in later Babylonian always stands for "pot" (see Brünnow's *List*, No. 5893), but pots were made of clay in the early times. Indeed, clay must have been employed for that long before it was employed for tablet writing, and in that early period it would be natural in writing to use the sign to designate a clay bed, or field of clay. The context indicates that that is the case in this tablet.


² This sign, , Thureau-Dangin, *Supplément*, No. 517^{bis}, compares to . Miss Ogden first suggested the identification with , which I believe to be correct.  is afterward written , (Thureau-Dangin's *Textes chaldéens inédits*, No. 3, II, 6), and , (Manishtu-irba, *Stele*, Face A, xiii, 2), and , (Gudea, B. i. 8). From this latter form it is easy to see how the neo-Babylonian and Assyrian forms are derived. QA usually is the ideogram for a measure, which was the fractional part of a GUR or talent. Our tablet shows that the sign was originally the picture of a small vessel, which was, no doubt, used as a measure, and which was formed with a rounding bottom so as to be easily held in or on the palm of the hand, thus . The sign seems to be here a phonetic complement. It is of interest to note how early the use of phonetic complements began. One occurs on the Blau monument B. l. 2 (cf. *JAOS.* vol. xxii, p. 123).


³ On this sign I am as yet able to obtain no light.





⁴ The form of this sign is as archaic as any form of it yet discovered, except the form in which it appears on the tablet of Father Scheil referred to in n. 1. It indicates that this text is younger than that.

⁵ Cf. Dangin's *Récherches Sup.*, No. 419. Delitzsch correctly explains its origin, *Ursprung der Keilschriftzeichen*, 168 ff.




⁶ The identification of this sign is somewhat uncertain. Its form, , resembles somewhat , the form in which Gudea, (col. A, xviii, 20), writes . I have with some hesitation identified it with that sign, which has in Sumerian the value LAL, and the meanings, "honey" and "good." With this same sign I have also identified , which occurs on Blau monument A, Rev., l. 2 (cf. *JAOS.*, vol. xxii, pp. 119, 120, and 122, n. 26). Was not the form of it in our present text a rude picture of a bee entering a hive, and the form on the Blau monument a variant, in which the hive is omitted, but the sting added?





⁷ This sign, , Thureau-Dangin correctly identified in *R. Sup.*, 44. Delitzsch's view of the origin is confirmed. It is the picture of a court plus the motive for great.



⁸ This sign, , Thureau-Dangin does not identify (cf. his *Supplément*, No. 230^{bis}). He wavers between two or three possibilities. I




tentatively identify it with ,  of Gudea (Dangin's *Récherches*, No. 117), and with the sign , which occurs in de Sarzec-Heuzey's *Découvertes*, pl. 1^{bis}, in two or three different connections.  has the meaning "Akkad," which suits the connection in the tablet before us, and "Urṭu," a kind of plant, which satisfies the meaning in the various connections in which the sign occurs in the *Découvertes*. I would suggest that the sign in the form on this tablet is intended for a picture of the leaf of some plant, that it originally represented the plant, and that it was applied to Akkad because that plant grew there in abundance.






⁹ This sign is thus identified by Thureau-Dangin (*Sup.*, No. 438). I interpret it by Brünnow, *List*, No. 11259.










¹⁰ This sign, , was identified by Thureau-Dangin (*Sup.*, 539^{ter}). It is evidently the picture of a hand with the thumb turned in. Hilprecht (*OBI.*, pt. ii, p. 40) and Delitzsch (*Ursprung der Keilschriftzeichen*) regard the sign as the picture of an arm. That was evidently a later form of the sign, or possibly a variant of the one before us. That it was simply the picture of a hand in early times the sign before us proves. Here it is the right hand. In some cases it may have been the left hand () in which cases it would approximate closely in form to the picture of a wing () in Blau monument B. This confirms my identification of that sign as a variant of the sign for hand (*JAOS.*, xxii, 124, n. 11).






¹¹ This sign, , occurs also on Blau monument B. I was able, from its connection in the tablet now under discussion, to identify it, when at work on the Blau text, with  +  (cf. *JAOS.*, vol. xxii, p. 124, n. 8), the latter occurring in Lugalzaggisi as , (cf. *OBI.*, 87, I, 13). Our sign gives the latter in a more curved and archaic form. The first element is the sign for "two," and represented the concept "doubling" or "increasing," "making abundant" (cf. Delitzsch, *Ursprung der Keilschriftzeichen*, p. 47, n.). The second element represented the concept "side," or "that which is seen" (Delitzsch, *op. cit.*, p. 141), and naturally came to express in connection with a heavenly body, "disc," and then "brilliance." In our text this sign is used to describe first the sun, and then the moon. There can, I think, be no doubt but that the identification is right.





¹² The group of signs which begins at this point is most puzzling, and my rendering is tentatively put forward with much hesitation. I have puzzled much over what constitutes the first sign. Is the line at this point a case-divider, or is it, like the basal line of  in col. I, a portion of a sign which might be easily mistaken for a case-divider? After much hesitation this seems to me the more probable view. In that case the first sign is . But what can this mean? May






















it not be a variant form of , which a lexicographical tablet published in the *Cuneiform Texts from Babylonian Tablets in the British Museum*, pt. v (No. 81-7-27, 49), defines as ? I tentatively so take it.  stands for "eye," "face," etc., and seems in our tablet to have the meaning of "before."

 is written in *Découvertes*, pl. 1^{bis}, in the form , and has usually been regarded as the picture of an eye. So Oppert, *Expedition en Mésopotamie*, ii, 64, Delitzsch, *op. cit.*, 111, and Ball, *PSBA.*, xiii, 96. Probably the sign did originate in attempts to picture the eye, but as in some cases (cf. *JAOS.*, xxii, 125, "addition to n. 81"), it was represented in the earliest writing by various pictographs.  pictures the eye in one way,  in another. Perhaps the latter was conceived as representing the way in which a ray of light strikes the eye. Our sign, , may have been intended to represent the arch of the eye and the line of the nose, and was probably not intended in the first instance to represent the eye, but the face, and so would naturally mean "before." As the picture for eye was afterward used in the same meaning, it would be natural for it to supersede the other.


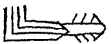






¹³ This sign, , I take to be an older form of  (cf. Thureau-Dangin's *Récherches*, No. 326), which appears in later Babylonian and Assyrian as . S^c 260 ff. calls it a *gunu* of  (old Babylonian ), and Delitzsch (*op. cit.*, 68) is probably right in accepting this as the explanation of the origin of . He is also right (*ibid.*, p. 69) in the view that  is a picture of a peg or post. A log or tree was represented by  (later ), and the log sharpened so as to stick in the ground represented the idea of "building," "making," or "doing," and the *gunu* of it, the idea of doing these things with energy or despatch. From this the sign came to represent rapid motion toward a thing, and then as a post-position to have the meaning "unto," the meaning which it has in our inscription. Kent has suggested (*AJSL.*, vol. xiii, 299 ff.) that the *gunu* signs were originally the picture of a hand. It is a suggestion which has much in its favor, but the form in which the sign occurs in our tablet gives the suggestion of the hand by five dots, which represent the five fingers.

¹⁴ This sign, , is written  on tablet γ (cf. Thureau-Dangin's *Supplément*, No. 231^{bis}). The French savant has not identified it. I take it to be an older form of , later  (cf. Thureau-Dangin's *Récherches*, No. 233). It signified "mound," "abode," etc. Delitzsch (*Ursprung der Keilschriftzeichen*, 90 ff., and 156) explains the origin of this sign from the form which is used by Gudea(?), deriving it from , "court," plus the *gunu* signs. Perhaps Babylonian scribes understood it in this manner, but it seems clear to me that in the sign before us we have the diagram of a mound, dotted with dwellings.

¹⁵ This sign, , I take to be an older form of , later  (cf. Thureau-Dangin's *Récherches*, No. 129), meaning "bricks," or "to make bricks." These signs were once, as is well recognized, written perpendicularly. This very tablet was, perhaps, held in reading so that this sign would appear . It was, I think, intended to represent the arch of a brick kiln with the smoke from the kiln rising above. In the later form the smoke is omitted and part of another arch added.

¹⁶ This sign is very puzzling. Its form, , was apparently a picture of the neck and head of an ass, probably the original of the later , which still later became . Delitzsch has called attention (*op. cit.*, 146-149) to the fact that in the period between Lugalzaggisi and Gudea there is quite a series of signs which are almost identical in form. Thus, in addition to the sign already given, we have  equivalent to , "foot" (cf. Dangin, *Récherches*, No. 224), and in Manishtu-irba and Alu-usharshid , equal to  (cf. Scheil's *Textes élamites-sémitiques*, pl. 1, col. I. 3. 8, and *OBI*, Nos. 5 and 6), "kiš." Now Delitzsch finds the key to this group of signs in , a hypothetical ground-form of "kiš," which does indeed approach the form , which the sign assumes as late as Gudea. Delitzsch explains this as the "Urmotive"  which designated "mass," plus the *gunu* signs. This gives him the meaning *kiš-satu*, "host," from which he thinks the sign came to signify "strength." He further thinks  was simply a variant of , and was applied to the feet because of their strength. Similarly he derives  from  plus  staff, assuming, apparently, that every ass had to be kicked and beaten. Now the scribes of a later time may have reasoned thus, and Delitzsch is possibly right in his explanation of , but as for the rest his explanation is too abstract to correspond to primitive ideas. , the ancestor of the sign , was, I believe, rightly explained by Houghton as long ago as 1878 (*TSBA.*, vol. vi, 470 ff.) as originally a picture of the human foot with a sandal bound around the ankle. The sandal distinguished it from  = , which signified "stand," "go," etc. This sign might in time come to represent "strength" and the verb "to be strong." The sign  is, I believe, a lineal descendant of the sign on the Hoffman tablet, which was originally the picture of the head and neck

of an ass. That, too, would naturally be used to represent the idea, "to be strong." Later, when the picture-writing had given way to linear writing, the forms of these three signs so nearly approximated one another that their functions were somewhat confused; hence the sign for "foot" displaced the sign for "ass" as a means of expressing the idea of strength. On the confusion of one of these signs with still another during this period, cf. Thureau-Dangin, *Supplément*, pp. 11-15. This discussion will explain my reasons for the interpretation of the sign. The reason for translating this last case as a prayer is that the inscription of Lugalzaggisi (*OBI.*, No. 87), inscription B. of Gudea, and those of many later kings have similar conclusions.

¹⁷ This last sign, originally written in an upright position, , is evidently the picture of the top of a palm tree. The sign for palm tree in the time of Lugalzaggisi was . Delitzsch explains this latter form as composed of three elements,  = Sig, "favor;"  = , "open," "distribute," and  = , "people;" the whole meaning, "the tree which gives blessings to people" (cf. *op. cit.*, 144 ff.). Ball, on the other hand, regards the sign as the branch of a date palm to which a cone, such as are so often pictured on the monuments in the hands of winged beings, is being applied (cf. *PSBA.*, xvi, 193). I was inclined, until within the last few weeks, to think Delitzsch right (cf. my *Semitic Origins*, 161), but his view seems to me now too abstract, and Ball's seems preferable. It is clear, however, that, as noted in at least three other cases, there was a struggle between two different forms in the early writing, one of which finally displaced the other. The earlier form was the picture of a palm tree, such as we have on the Hoffman tablet; the later represented the act of artificial fertilization of the palm. As I have shown in the *Semitic Origins* that the artificial fertilization of the date palm was of Semitic origin, it follows that the picture of the palm which we have here is probably of Sumerian origin, while the variant form, which represented the fertilization, and which finally displaced the other, is of Semitic origin. I therefore identify the sign with , and interpret it as No. 7290 of Brünnow's *List*.

In conclusion it should be remarked that the study of such inscriptions as this and the Blau monuments makes it evident that the nearer we push back to the beginnings of Babylonian writing the greater is the variety of sign-forms upon which we come. As long as the sign was a picture of an object the picture might be varied at the fancy of the scribe. When the pictures became conventionalized, there was a period of struggle between the various forms of the signs which resulted in the survival of the fittest.

Creator gods.—By CRAWFORD H. TOY, Professor in Harvard University, Cambridge, Mass.

ACCORDING to Mr. Andrew Lang, the original high gods of all savage peoples are beings who had no beginning and do not die; fathers of their people, patrons and guardians of morality for the tribe and for the individual. If, he says, in later times they show a lower character, it is because they have degenerated; the original pure instinct of the savage has become tainted by the growth of animistic culture, and it has required ages for men to get back to the plane of their primal innocence and ethical clear-sightedness. As such lower grades show themselves in all half-civilized nations, his theory involves the supposition of a universal process of religious degeneration, and he does not shrink from the logical conclusion. All the gods of the great nations, he maintains, have traversed this cycle of transformations, first a degradation and then an elevation. As an interesting instance of the process he cites Jehovah, the god of the Hebrews. In the earliest Hebrew records Jehovah is an immoral anthropomorphic person, but undoubtedly, says Mr. Lang, he was at an earlier stage moral; he had fallen from his high estate of the olden time when he was morally the equal of the Bushman Cagn and the Australian Daramulun and Baiame. No Hebrew or other Semitic ground for this statement is adduced or claimed by Mr. Lang, but in his mind it is demonstrated by the consideration that, if it were otherwise, the Hebrew theistic system would be inferior to that of all other primitive peoples. That is, he rests his construction of religious history on what he holds to be an established fact, namely, that all original creator gods are eternal and moral. The subsequent degeneration of these gods he ascribes to the influence of the animistic belief, a later growth, which, while it has given us as a precious possession the doctrine of the soul, led the popular fancy at first into all manner of degrading customs of worship and repulsive stories of gods. The alleged facts of savage belief on which this superstructure is based have been criticized by several recent writers,¹

¹ Notably by Mr. Sidney Hartland, in *Folklore*, 1898.

and their details need not be repeated here. I wish to call attention to one or two errors into which, as it seems to me, Mr. Lang has fallen in the interpretation of his evidence.

One preliminary remark may be made. It has been said by eminent authorities that early religion has no connection with morals. This statement may mean that early morals are very low, or that early gods take no account of the conduct of men; the former of these propositions is to be taken with a "distinguo," the latter is contrary to much that we know of early peoples. As to the first, it is generally held (and it is admitted by Mr. Lang) that the moral character of a god is that of his worshipers, so that from the ethical attributes of a deity we may infer the ethical ideas of the community at the time when these attributes are ascribed to the deity; if he be thought of as a person, he must have some sort of moral character, and this must be included in the religion of the time. As to the second proposition, it is difficult, from paucity of data, to bring convincing evidence on one side or the other. Even the remarkably full and clear description of the Central Australians given by Messrs. Spencer and Gillen leaves much unexplained. These tribes do not appear to connect conduct with any superhuman being; but, on the one hand, they seem to have no religious worship of any kind, and indeed no gods; and, on the other hand, they have a definite system of moral conduct, so that, if they have gods, we cannot say that these do not take account of moral conduct. The question is well illustrated by the Old Testament records: if we looked only at the denunciations of the people by the prophets, we might conclude that the Israelitish religion of the time was quite divorced from morality, that the Yahweh of the popular faith cared for nothing but his perquisites of sacrifice; yet we can hardly suppose this possible of a community that produced the prophets and the legal codes. We find generally in savage peoples that the marriage laws (which are usually strict) are under the protection of the gods. As far as the evidence goes, it cannot be said that the gods ever stand aloof from morality as it is understood in their communities.¹ The question of the sort of morality in vogue in any given place and time is one of prime importance.

¹ Of the two sorts of service offered to the gods, the ritual and the moral, the former is apt to be more in evidence; the latter may easily be overlooked by the observer.

Mr. Lang has collected a large mass of material going to show that many early creator gods are morally pure and high. He has omitted certain other material that looks in a different direction, but there is an element of truth in what he says: we do find good ethical ideas and customs in low tribes. What he fails to give due weight to is that this ethical element, embodied in the person of the god, represents nothing more than the simple kindly instincts and social necessities of all communities. Man is born with certain impulses of sympathy, which he shares to some extent with the lower animals. These impulses, when not counterbalanced by the selfish instinct, lead him to treat his fellow-man or fellow-animal with kindness. The well-known story of Mungo Park is a good illustration of natural sympathy. Savage man is free from some of the complications of civilized life—from the selfish impulses arising from the accumulation of personal property and from the innumerable obligations springing from multiplied relations with fellow-men. This simplicity of savage life gives it such an air of innocence that some philosophers have held that civilization means declension in virtue. That is an unwarranted fancy, but doubtless the simple virtues exist among savages.¹ Further, as soon as society is organized, some rules respecting regard for life and property must be established. It is not strange that Mr. Lang's savages should have laws against murder, theft and infringement of marriage rights, and that the gods should be the guardians of the laws. And this is all that is involved in his contention regarding early moral creators. They embody the current morality, and that represents the natural impulses of human beings.² It may be added that the 'eternal' character that he ascribes to early gods is of an equally simple nature. On this point the statements of savage theology are often vague: the creator may have had a beginning or he may not. Where he is conceived of as without beginning, this is due to the necessity of having some fixed point of starting. It is the negation of beginning and not the affirmation of eternity. It is impossible to go back and back

¹ This remains true after the abstraction of probable or possible influence from contact with whites.

² See, for example, the precepts of the Kurnai god, given by Howitt, in *Journ. Anthr. Inst.*, 1885, p. 313.

for ever—one must pause somewhere.¹ How a given tribe came to fix on a certain person as the originator of the world, we cannot say; any such determination has been preceded by a long period of which no records exist, and the conception of the creator is doubtless a relatively late achievement.

The view that the animistic cult has induced degeneration appears to rest on a confusion of ideas. Since the morality of the religion of any period is the morality of the community of the period, decadence in theistic conceptions must mean decadence of society; but the theory of a universal social degeneration will hardly find favor even with Mr. Lang. Though it is far from being proved that mythology is a product of animistic belief, it is true that the morality assumed in early myths (and in later ones as well) is often inferior to that ascribed to the great gods. Theology and mythology represent, to a certain extent, two distinct lines of thought, two currents, as Mr. Lang well puts it, flowing together through religion. Theology deals with the conduct of life, mythology with the construction of the world and of society. For this reason the latter permits the play of popular fancy to an extent not generally possible in the former. Mythology is not religion but science—a distinction that Mr. Lang fails to make. When men approach the gods in worship, they think of them as the guardians of the existing social laws; when they undertake to account for the origin of things, they are unrestrained by moral law, and may give loose rein to the baser side of human nature. It is the difference between dealing with the present, for which men feel responsible, and dealing with the past, for which they do not feel responsible. One example is found among the Central Australians, whose stories of the ancestors (creators and social constructors) set at naught all the ethical customs that the people now observe with the utmost strictness. An example of a slightly different character is furnished by the extermination law of Deuteronomy (ch. 13), and Joshua (chs. 6–11), which has in mind a former vanished situation, and would probably have been impossible for the end of the seventh

¹ This doubtless is the signification of the Central Australian Ungambikula, "out of nothing" (Spencer and Gillen, *Central Australia*, p. 388), not, however, exactly "self-existing," as Mr. Lang renders it (*Making of Religion*, p. xxi).

century B. C. in the kingdom of Judah. What the Israelites in the time of the conquest actually did to the Canaanites was far more humane than the policy ascribed by the later writers to Yahweh; but we should not call this a proof of ethical degeneration.

There is, however, another consideration, which has been well stated by Mr. Lang himself.¹ Myths often contain expressions of early usages and ideas that are condemned by a later age. Cannibal gods, for example, had their origin in a cannibal society, and polyandrous goddesses in a polyandrous society.² Stories of this sort continue for a long time to stand side by side with elevated conceptions of the character of the gods; the examples are too well known to need citation. Here, again, we have not degeneration, but rather the opposite. It is the antagonism between the more advanced and the more backward circles of the community; an antagonism that exists, so far as we know, everywhere and at all times. Some portion of the morally low mythical material reflects the usages of a former time. We cannot say which of the two lines of thought, the religious and the mythical, was the earlier. Probably they began at the same time; the wish to account for the world was probably coeval with the impulse to enter into relations with the superhuman powers.³ The fact suggests another point that Mr. Lang appears not to have had in mind. He has observed that in some cases, among savage tribes, morally low stories occur in conjunction with morally high conceptions of deities, and in these cases his explanation is degeneration. But the same fact appears in Homer, and the explanation is probably the same in the two cases. In Homer we easily recognize a fairly high moral conception with a background of low myths, and we assume that the Homeric period was preceded by a long period of barbarism. We have probably to assume a similar condition in the savage history known to us. But Mr. Lang appears to take it for granted that Daramulun, Baiame, and the rest are primitive, and he cannot account for their moral eleva-

¹ In the first edition of his *Myth, Ritual and Religion*.

² See Barton; *Semitic Origins*, ch. 2.

³ There are facts that appear to militate against this view. The question is too large to be discussed here.

tion except by the supposition of a primitive ethical intuition in the human soul. Now, from the point of view of theism, human nature is a divine revelation, and human thought a divine intuition, and so far he is right; but he apparently wishes to see in high savage morality a full-grown intuition independent of the ordinary processes of human growth. His hypothesis involves the supposition of a full-grown social order, since the ethical laws to which he refers relate mainly to the constitution of society. He forgets that a hundred millenniums of human experience lie behind the gods of the lowest tribes we know. In this space of time there is room for any development that we can conceive, and there is a possible explanation of the ethical differences between mythology and religion.

In another point Mr. Lang's conception of religious history seems to be not well thought out. In the first place, he is under a misconception in supposing that he stands alone in the view that a god is not necessarily a development out of a ghost or a beast, but may have been originally thought of as a man-like being; others have held this view.¹ Thus he spends much time in assailing a position that is by no means the reigning one, and he seems to suppose that in refuting it he is overthrowing the argument for a gradual development of the idea of a god. He makes the mistake of parcelling off the genealogies of superhuman beings too sharply. All spirits, according to him, come from ghosts, and all high gods from man's primitive intuition of an exalted person who is creator and father. But, with our ignorance of early human history, it is impossible to rest in this smooth and simple division. If we had records of savage history for some thousands or myriads of years, we might venture to frame a definite theory of theogony; as a matter of fact, our knowledge of this history extends over only two hundred or three hundred years at most, and even in this short space it is most meagre. Moreover, such knowledge as we have of the history of human ideas and customs leads us to suppose that every idea or custom is complex, and has reached its existing form by the convergence of many lines of thought and experiment. It is not possible to say whether man began by deifying beasts or inanimate objects or human beings or ghosts or by

¹ Among them Mr. Hartland.

imagining great superhuman man-like beings as the authors of all things. There are facts that may be adduced in favor of all these hypotheses. Who can tell by what devious routes early man reached well-defined conceptions of the unseen Powers? We have to content ourselves with chronicling the earliest facts we can find, and awaiting the discovery of new facts that may throw light on the problem.

Mr. Lang attaches great importance to the fact that in many cases the "high gods" of savages are not approached with sacrifices and offerings, and, as he thinks, were never so worshiped. Such propitiation was reserved, he holds, for the undignified greedy spirits of ancestors and similar inferior supernatural beings. It is possible that certain gods have never been mollified by gifts or importuned for blessings; but in the nature of the case it is impossible for us to determine whether or not this is true. The memory of savages reaches back to no remote period, and what the original custom was they cannot tell. Possibly many ancient gods shared the fortunes of the Zulu Unkulunkulu,¹ who lived so long ago that the recollection of him had become dim, and the people's interest turned to their ancestral ghosts. With such changes in popular cults we may compare the Babylonian and Greek succession of divine dynasties, in which the somewhat vague figures of Heaven and Earth yield to nearer and more human deities. And in fact the savage Supreme Beings, described by Mr. Lang, commonly dwell in Heaven, and are more or less removed from the passions and the affairs of men. On the other hand, such creators or constructors as (according to Spencer and Gillen) the Central Australians recognized were decidedly human in their purposes, plans and modes of action, and neither to them nor to the spirits of the dead were gifts offered. These people seem to have no social relations proper with superhuman or extrahuman beings; they believe that their world was made or shaped by such beings, but, for themselves, they are satisfied to live their lives with such social regulations as have been devised by them in the course of ages. They are very nearly in the position of certain circles of our own time, who hold that the world was made, but see no advantage in entering into relations with the maker.

¹ As described in Callaway's *Amazulu*.

In this case, as in many others, modern thought, by philosophical reflection, has reached a conclusion not substantially different from that held vaguely by savages. We are unable to say whether or not the present creed of these Australians has always been held by them. If they once paid worship to the creator-ancestors, then some process has gone on in their history of which we know nothing. If they have never paid worship, they may represent an early sub-religious stage, possibly existing at some time everywhere, in which no social bonds united man to the extrahuman powers whose existence he vaguely recognized. Out of such unworshipped powers may have come, in the course of time, the distincter moral figures to whom no worship was offered. It is not improbable that there were different lines of development among different savage tribes, just as there have been among civilized peoples. We cannot explain how it was that the Indians and the Iranians, starting (as apparently they did) from the same body of beliefs, followed diverse paths, or how it was that both of these groups differed religiously so greatly from the Chinese. There appear to be initial and fundamental differences between the various savage systems of thought, and these, as well as their resemblances (in totemism, taboo, etc.), must be studied.

In regard to the relation, as to their origins, between spirits and man-like gods, one obvious point is not always had in mind. There may be such gods that never were spirits, but the rise of a god from a spirit is by no means inconceivable. Mr. Lang and others sometimes speak of spirits as if they were regarded by savages as immaterial. We know, however, that they are supposed to have bodies, real, though of a peculiar character, not subject to the ordinary laws of human bodies: they move rapidly through air or water or solid earth, may assume different shapes or become invisible, yet eat, drink and sleep as human beings do. Now Ea, Indra, Zeus and Yahweh have just such bodies, and, so far as corporeal form is concerned, might once have been spirits. Nor is there any difficulty in supposing that out of a mass of spirits one might in time be clothed with moral qualities and supreme dominion;¹ and it is not necessary

¹ Professor Hopkins calls my attention to the fact that the Lord-Spirit of Yoga philosophy is at first just such a being—a separate spirit, morally superior to other independent spirits.

to hold that moral gods arose always out of the same primeval form. There are facts that seem to be more easily explained by the supposition of a difference of origin between gods and spirits. In the old Hebrew system the angels (ancient gods) are kept distinct from the spirits; and the Chinese, Hindu, Greek and Hawaiian ancestral spirits form a class by themselves apart from the gods. On the other hand, the two classes, gods and spirits, are often identical in functions and powers: the god of plague is not to be distinguished in this regard from the spirit of disease; the Hebrew spirits sit in the divine council just as the angels do. Doubtless these civilized mythologies belong to a relatively late period, and presuppose a long preceding history; but there seems to be no good reason why the same fundamental ideas should not be found in widely separated ages of religious growth.

Sacrifice and animism are not certainly or necessarily coeval, and they do not imply religious declension. The beginnings of the sacrificial custom are not known to us, and we must beware of constructing the religious history of man from the few and uncertain reports we have received of savage beliefs. These beliefs have not yet been properly examined. When we have good opportunity to test the accounts of travelers we frequently find occasion to doubt their correctness. We criticise them from our several points of view; Mr. Tylor objects to one thing, Mr. Lang to another. Much contempt has been expressed for the reports made by travelers to the effect that certain tribes had no religious beliefs or usages; now, it seems, it may be necessary to guard against crediting savages with too much religion. But, whatever may turn out to be the truth on this point, we have to recognize the fact that sacrifice is connected with that sense of intimate relations between gods and men that has been the starting-point of the higher religions. Sacrifice has its mercenary non-moral side, and doubtless represents a religious conception inferior in certain regards to simple reverence for a just and loving deity. But it has its roots in human nature, and is an advance on a system in which the gods have nothing to do with human life.

Remarks on the Hebrew Text of Ben-Sira.—By CRAWFORD
H. TOR, Professor in Harvard University, Cambridge,
Mass.

ABOUT two thirds of the Hebrew text of Ben-Sira have now been discovered (most of chapters 3-16, 30-32, 35-51, and parts of other chapters)—enough to justify a provisional opinion as to its character. The heated discussions of the last five years appear to have ceased, and a consensus of judgment is gradually being reached. The view is gaining ground that the fragments discovered represent a genuine Hebrew text, but a very corrupt one—a text that has passed through many hands, has suffered a variety of fortunes, and only to a limited extent furthers the reconstruction of the original book.¹ The hypothesis that the Hebrew text, as a whole, is a retranslation from the Syriac or from the Greek or from both these, can hardly be maintained. The opposite view is supported by the following facts: (1) In a number of cases the Hebrew is obviously independent of the Versions,² and sometimes enables us to explain the erroneous readings of the latter.³ (2) While there is often agreement between the Hebrew and one or both of the Versions, the agreement is so irregularly distributed (the Hebrew inclining now to the Greek, now to the Syriac, in the same paragraph and even in the same couplet), that to suppose the scribe to be a translator would be to credit him with a highly improbable catholicity or capriciousness, or with a still more improbable spirit of critical research. (3) In the majority of passages the style has the qualities of the old aphoristic literature—the condensation and the curtiness (sometimes approaching obscurity) of Proverbs and

¹ This view is held by Neubauer, Cowley, Schechter, Taylor, Driver, G. Margoliouth, Smend, Bacher, König, I. Lévi, Nöldeke, Schlatter, Ryssel, Houtsma, Abrahams, E. N. Adler, Tyler, and others. On the opposite side are D. S. Margoliouth, and perhaps Bickell, Gaster and others.

² See, for example, 8. 6, 7, 11, 14, 15, 16, 9. 4, 11, 15, 10. 5, 7, 10, 17, 18, 22, 11. 28.

³ As in 18. 32f., 19. 1, 20. 6, 36. 26.

Koheleth—a literary form that a late translator would not be likely to attempt or to attain. (4) The vocabulary is so similar to that of the latest Old Testament writings that, after excluding a few Syriasms and Arabisms and some obvious imitations of Old Testament passages, we cannot regard it as belonging to the period during which translations would probably have been made; for such a period would almost certainly have betrayed itself by its diction.

In connection with the Aramaisms and Arabisms that occur in the Hebrew fragments the question arises: How far are these to be referred to the original Hebrew text, or to the earliest form of Hebrew text that can be fixed, or to the diction of later scribes?

First, as to the Aramaisms. The composition of the Hebrew Ben-Sira may be placed at about 190 B.C., at which time the current spoken Hebrew was probably largely contaminated with Aramaic words and expressions. The facts that Assyrian and Jewish officers of the time of Hezekiah were acquainted with Aramaic (2 Kgs. 18. 26), that Aramaic was the official language in the western provinces of the Persian empire, that Aramaeans were found in large numbers in the West, that portions of the books of Ezra and Daniel are written in Aramaic—all these show that this language had penetrated deep into the common speech of the Jewish territory. The Chronicler, writing in the third century, employs a number of Aramaisms, and many more occur in Koheleth, a book that may belong to the same period as Ben-Sira, or may be a century or more later. A comparison between these two shows some interesting resemblances and differences: they are alike in their free secular tone and spirit, both standing to a certain extent outside of the theocratic circle of interests; they differ in the fact that Koheleth shows no interest in the sacred books, while Ben-Sira's piety leads him to preserve the traditional expressions and grammatical constructions of classical Hebrew; thus, he freely employs *wa* with the Imperfect, while Koheleth has largely adopted *we* with the Perfect. It cannot be supposed that Chronicles, Koheleth and other late Biblical books exhaust the borrowed Aramaic vocabulary of the time; Ben-Sira may have used many words not found therein.

When we come down to the second century of our era, the point to which we can probably trace the existing text of Ben-

Sira (as will be shown below), the case is still stronger. Aramaic was then the vernacular of the Jews, Ben-Sira's book was not guarded by canonical sacredness and an authoritative text, and scribes might naturally introduce Aramaic words and expressions. In the succeeding centuries, down to the probable date of the MSS. of our Ben-Sira fragments (the tenth or the eleventh century) Aramaic influence continued. The linguistic relations, it is true, were modified: after the Moslem conquest, in the middle of the seventh century, the Jews, especially in Babylonia, began to adopt Arabic as their language of intercourse; but they continued to write in Aramaic or in Hebrew with a mixture of Aramaic (and Arabic), and the employment of Syriac terms by copyists would be natural.

It thus appears that at no period in the history of the Hebrew text of Ben-Sira would it be strange to find that it contained Aramaic words. These might be of the Western dialect or of the Eastern; but it is not always easy to draw the line between the two in Jewish writings, for the reason that in these writings both dialects were affected by Hebrew. Such a form as נחכם (BS. 37. 19), if it be an Imperfect, is certainly Eastern; but it is difficult to make such a distinction in the vocabulary.

The number of Aramaic words not found in Old Testament or in late Hebrew writings is not great. In addition to the one mentioned above (נחכם) the following appear to be Syriasm. In 3. 13, עוֹזֵב is employed in the sense "forgive," in imitation of Syr. שִׁבַּח; 8. 11, תּוֹחַח, "depart," if it be the right reading, is not Hebrew; but the word is, perhaps, miswriting of תּוֹזֵעַ, and the text appears to be in disorder; 6. 7, 13. 11b, נִסְיוֹן, for which Saadia has מִסָּה and מִנְסָה; 12. 13, 39. 30, חֵית שֵׁן, "beasts of prey," Hebrew חֵית הַשָּׂדֶה or ה' הָאָרֶץ; 30. 20c, נֶאֱמַן "eunuch" is translation of Syr. מִהִמְנָא; 8. 1, קִשָּׁה, "hard, cruel;" 9. 18, מִשָּׂא עַל פִּיהוּ; 31. 7, נִקַּשׁ, "stumble," cf. 41. 2c; 38. 25d, שְׁעִית "discourses." בֵּית (42. 12)

¹ It is impossible to understand נֶאֱמַן here otherwise than in the sense of "eunuch," and this sense is not Hebrew; the Hebrew word for "eunuch" is סָרִיס. Arabic أمين الصندوق is "treasurer," and an εἰνοῦχος might be a treasurer, or might be a "trusted" person in any position; but this fact does not warrant us in regarding "eunuch" as a Hebrew signification of נֶאֱמַן.

“among” (= **בִּינָת**) is doubtful; it occurs in Pr. 8. 2, and may perhaps be regarded as a neohebraism.

Very few Arabisms occur in the fragments. If the reading of 12. 3 (**אֵין טוֹבָה לַמְנוּחַ רָשָׁע וְגַם [וְגוֹי] צָרָקָה לֹא עֲשֶׂה**) be correct, **מְנוּחַ** must be taken as identical with Arabic **منح** —the word is not elsewhere found in Hebrew or Aramaic. The Versions, however, do not so understand it: Greek has *ἐνδελεχίζοντι* “persistent,” apparently reading some form of **נָוַח**; Syriac has **מִיָּקֵר**, apparently reading Piel or Hifil of **נִוַּח**. Smend, followed by Ryssel, emends to **מְנִיָּה**, translating: “there is no advantage for him who leaves wicked men in quiet.” The objection to this reading is that it fails to bring out the point demanded by the connection, namely, the diverse results of giving to the righteous and to the ungodly; thus, in v. 7: “give to the good and withhold from the bad.” Failing of a better explanation, we shall have to suppose that a root **מָנַח** “give” did exist in Hebrew, or that the form here used is an Arabism that came in to the Hebrew vocabulary not from late scribes (since Septuagint and Syriac had nearly these consonants), but at an early period.

The stem **חָלַק** undoubtedly occurs (38. 1 and elsewhere) in the sense “create,” a meaning found elsewhere only in Arabic. It is possible, therefore, that in Ben-Sira it is an Arabism, the insertion of an Arabic-speaking scribe; a fact that would not be at all strange, since Arabic became the language of the Jews in the Moslem realm probably before the tenth century. Several scholars (Nöldeke and others) hold, however, that the sense “create” may be good Hebrew. The stem has acquired sets of opposed meanings, on the one hand, “create,” on the other hand, “perish,” and both may be derived from an original sense “divide, measure, arrange.” It is conceivable that the meaning “create” existed in Hebrew, and only by accident does not occur in the Hebrew texts. Yet this cannot be said to be likely, and there is no difficulty in accepting the word as an Arabism.

The participle **מִשְׁרָקָה** “shining” (50. 7) appears to be an Arabism. One may doubt the origin of **רָעָה** “have regard for, honor” (38. 1), a meaning that may come naturally from the common Old Testament sense “pasture, feed, take care of.” The special sense “honor” may have come in under Arabic influence.

It is to be noted that, while there are almost certainly cases of translation from a Syriac text (notably in the acrostic, 51. 12-30), not all seeming cases of translation are to be so explained. As an illustration we may take 46. 20, in which the first couplet (speaking of Samuel) reads: "and even after his death he allowed himself to be consulted, and declared to the king his ways." Here the word "ways" does not agree with the Old Testament narration and is obviously inappropriate; the Greek, the Syriac and the Latin have "his end," which is what the connection demands; the Hebrew ררכי is a synonym of ארחותי, and this is a corruption of אחריתו. As the Syriac has אורחה, it is natural to suppose (as Lévi does) that the Hebrew is a translation of the incorrect Syriac form. But a Hebrew scribe with the Syriac before him would probably have written the familiar Hebrew word ארח and not ררך. The latter is more simply explained as a variation, by a Hebrew scribe, of Hebrew ארח, which would be accounted for as a corruption of the original Hebrew אחרית.

The question arises, how far we can now establish the original Hebrew text of Ben-Sira. The answer must be, that it is not possible to fix the original as a whole. There are many passages in which there need not be doubt as to the form, and there are many in which both form and meaning are questionable. The most that can now be attempted is to establish a probable text of about the third century of our era. In general, our Hebrew fragments agree with the quotations in Saadia, and therefore may be taken to represent the current text of the tenth century. The Greek, Latin, and Syriac Versions furnish a somewhat corrupted text of the third, fourth, and fifth centuries, and the Talmud quotations appear to be in general accord with the unglossed Greek (Gb.). In the Hebrew and the Versions we have probably two generally independent lines of tradition; the one coming down chiefly or wholly through Palestinian and Babylonian Jews, the other coming chiefly through Alexandrian Jews and Christians. The former retained the original Hebrew, and there is no evidence that a Jewish Aramaic translation of it was made. The existence of the Hebrew was known to Jerome, but, instead of going to the original, he adopted the Old Latin Version without revision;—a regrettable procedure, as a translation by Jerome would have gone far to fix the text of the

fourth century for us. As it is, the Old Latin offers a highly glossed text of about the third century, and this may be controlled in part by the Syriac and the unglossed Greek. Such comparison being made, we have in the Versions a text standing at the distance of about four centuries from the original translation into Greek, and bearing the marks of scribal carelessness and revision. The Syriac translator undoubtedly exercises his editorial functions often freely, and it is not improbable that Ben-Sira's grandson took liberties with the text in the interests of Greek clearness and smoothness. The Hebrew, on its side, had suffered similar fortunes. In the third century it had been nearly five hundred years in the hands of scribes, and it would have been a miracle if it had escaped without additions, omissions, and corruptions. Our fragments are burdened with another long period (about four hundred years) of transmission; yet, after eliminating obvious blunders of writing and arrangement, we may conclude that their text is not very different from that known to the Talmudic writers, after this latter, in its turn, has been freed from excrescences. The result is that we reach two main text-records in the third century, one Hebrew and one Greek. When these are compared, it appears that their agreements and disagreements are so involved that it is impossible to distinguish families of manuscripts in a strict sense. We are rather led to the conclusion that the constant activity of scribes throughout the Christian and Jewish worlds had produced a considerable variety of readings, and that these are distributed among the different groups according to laws with which we are not acquainted. For convenience's sake we distinguish two Greek types, one Syriac, and two or three Hebrew, but an archetypal text accounting for all these we are not yet able to construct.

The Collection of Oriental Antiquities at the United States National Museum.—By Dr. I. M. CASANOWICZ, U. S. National Museum, Washington, D. C.

THE beginnings of the Section of Oriental Antiquities at the National Museum were described by Dr. Cyrus Adler in this *Journal*, vol. xiii, pp. ccciff. Since then it has slowly but steadily grown, and though it is still in the "day of small things," it comprises sufficient material to be representative in its several divisions.

The section is now officially divided into the "Division of Historic Archaeology" and the "Division of Historic Religions," both forming a part of the "Department of Anthropology."

The Division of Historic Archaeology occupies the two alcoves west of the Rotunda. The visitor's eye is attracted to them by the colossal composite figures of the human-headed winged lion and bull which guard the entrance to these compartments as they once guarded the entrance to the palaces of the Assyrian kings. Inside are installed the collections of Biblical, Assyro-Babylonian, Egyptian and Hittite antiquities. The collection of Biblical antiquities includes casts of the monuments found on Palestinian soil, and some specimens of the geology and flora of Palestine; a collection of the musical instruments mentioned in the Bible; a series of the coins of Bible lands; a collection of the precious stones mentioned in the Bible; and objects belonging to modern life in the Orient, which serve to explain and illustrate many allusions in the Bible, such as a goatskin water-bag, millstones, *kohl*, etc. The Bible itself is represented by a collection of facsimiles of manuscripts, and old and rare editions of the original texts, as well as by copies of the most important ancient and modern translations.

Of the Assyro-Babylonian objects may be mentioned, besides the composite figures referred to above, the black obelisk of Shalmaneser II, the stele of Sargon II, found in Cyprus, the two Gudea figures from Telloh, Deluge tablets, a model of a Temple-Tower of Babel, made at the Museum after the descrip-

tions of the Temple-Tower of Borsippa, and a series of bas-reliefs. The most important recent accession from Mesopotamia consists in a collection of Judæo-Babylonian magic bowls, inscribed in Hebrew and Syriac respectively, and sixty seals which range in date from about 3,500 down to the Persian period. The National Museum now owns nearly a hundred Oriental seals and upward of three hundred flat casts of seals.

Among the Egyptian antiquities, those connected with the funeral rites obviously form the principal part. There is a stately mummy well preserved in its original case. There are six finely wrought coffins, presented by the Egyptian government; besides funerary boxes, jars, scarabæi, *nshabti* figurines; a series of squeezes from the tomb of Taia; facsimiles of Ani's and Anhai's papyri of the "Book of the Dead," etc. But also other objects, bearing on the religion, culture and history of the land of the Pharaohs, are not lacking. There are specimens of the geology and flora of Egypt, casts of the statues of some of the chief divinities and of the great historic rulers, such as Chefren, the builder of the second largest pyramid, Amenophis II, Seti and his great son Rameses II, Tirhakah, and others; also the facsimiles of the Rosetta Stone and the Canopus Decree.

The monuments found in Asia Minor and North Syria and in part attributed to the Hittites, include, besides various divinities, composite figures, hunting scenes, etc., the colossal statue of Hadad and the torso of the statue of Panammu II, both of which bear "old-Aramæan" inscriptions.

The Division of Historic Archaeology includes, besides two Persepolitan casts, a rare piece of mosaic, measuring about eight by six feet and representing a lion attacking a wild ass. This piece was taken from the floor of a temple of Astarte in Carthage. Then the serpent column of Delphi, a cast of the bronze original now at Constantinople, which was dedicated by the confederate Greek cities to Apollo at Delphi after their victory over the Persian at Plataea (476 B. C.), and is thus a relic commemorating the first struggle of the Greeks for liberty and independence.

Leaving the Division of Historic Archaeology and returning to the Rotunda, two colossal images of Viṣṇu and Buddha, which, for lack of other accommodations, are placed at the foot

of the staircase, beacon the visitor to the Division of Historic Religions in the southwest gallery. Here the collections of ceremonial objects of six religions have thus far found a home, in fourteen large cases, besides a number of small Kensington cases. The cases are built in compartments, or according to the alcove system, so that each individual religious collection may be viewed and studied separately, without intrusion from another one.

The first two compartments are occupied by the collection of modern Jewish ceremonial objects. The collection is perhaps unrivaled in completeness and in artistic and historical value. It comprises curtains of the Holy Ark; Torah scrolls with silver bells, breastplates and pointers; Megilloth in revolving cases of wood and silver of rare workmanship; manuscripts of prayer books; lamps, phylacteries, prayer-shawls, and other objects used in the service of the Synagogue. Then the objects used on feast days, such as the *shofar*, *lulab* and *ethrog*, etc., and especially a complete set for the semi-ritual Passover meal (*seder*). One case is given to objects used on special occasions, such as utensils of circumcision, marriage contracts, wedding rings, a slaughtering knife, etc. Another case contains a series of embroideries and tapestries depicting Bible narratives, as the sacrifice of Isaac, the worshiping of the golden calf, the fight of David and Goliath, etc.

Judaism's daughter-religion, Mohammedanism, comes next, showing a model of a mosque, manuscripts of the Koran upon their inlaid stands, mosque lamps, flags and tablets, some of the equipment of pilgrims to Mecca, and the costumes and utensils of several of the Dervish orders.

Graeco-Roman religious sentiments are illustrated by a set of statues and busts of the *dei maiores*, as well as *minores*, and bas-reliefs which depict mythological scenes, as the battle of the gods with the Titans, etc. A collection of sepulchral and votive tablets allows a glimpse into the popular religious views and practices.

Leaving this classic ground, the visitor is transferred in spirit to East Asia. There he first meets Brahmanism, which sways the millions of India. The collection comprises a set of marble images of the so-called *trimūrti* gods and their suites, of the *avatars* of Viṣṇu and some of the minor divinities. Special

notice deserve two finely carved stone steles, representing Viṣṇu and his retinue. Temple utensils, as lamps, vases, cruses, illustrate some of the Brahmanic religious customs. Caste-marks give opportunity for the explanation of the caste system, which plays such an important part in the religious, political and social life of India. The contemplative and ascetic element of Hinduism is illustrated by a series of models of Yogins and ascetics in various attitudes.





Buddhism, the offspring of Brahmanism, is represented by a rich collection, filling two alcoves. There is any number of representations of Buddha, in bronze, stone, clam shells, and carved and lacquered wood, some of which have much art value. No less varied are the forms and attitudes. The Çākya sage can be seen in the Burmese, Sinhalese, Japanese and Tibetan conceptions of him; sitting in meditation, preaching, blessing, and even reclining. The hierarchy is represented by several images of *whats* and monks. The elaborate ritual of Buddhism is illustrated by a large collection of musical instruments, cruses, candlesticks, rosaries, prayer-wheels, *dorjes* (*vajras*), etc.; while among the representations of Buddhist sacred edifices may be especially mentioned a magnificent model of the Wat Chang at Bangkok, Siam. One case is given up to the syncretistic and popular accretions to Buddhism in China and Japan. The sacred literature of Buddhism is represented by the Siamese edition of the *Tripitaka*, presented by the King of Siam.

Shintoism, the primitive national religion of Japan, which even now contests Buddhist supremacy in that country, is represented by a collection of shrines and their contents, as the *go-hei*, mirror, etc., and some votive tablets.



A Korean sorcerer's outfit and a collection of amulets complete the exhibit of religious ceremonial objects in its present status.








The National Museum also possesses a collection of objects belonging to Christian ceremonials, including some valuable icons, priests' vestments, croziers, altar coverings, chalices and other church paraphernalia, of the Eastern branch of the Church as well as of the Western. It is expected that in the near future a special alcove will be set aside for the exhibition of this collection.

The Name of the Ferryman in the Deluge Tablets.—By Mr.
S. H. LANGDON, Columbia University, New York City.

THE name of the ferryman in the Deluge Tablets has had a varied history. It was first read by George Smith, Ur-Hamsi, giving syllabic value to the first sign and ideographic value to the second. In the translation of Smith's book into German, by Hermann Delitzsch, the same reading was followed. Sayce, in 1880, read Nes-Êa, on the basis of a bilingual tablet which he says Pinches had discovered and which explained the sign , ur, as meaning Nesu, a young lion. Sayce was also the first to give the reading Êa for , which he says is never written  with five heads, as George Smith reads (*passim*). No one besides Mr. Pinches has given any evidence of the reading Nesu for . Sayce himself did not see the tablet; it is not mentioned in Brûnnow's *Syllabar*, nor by any other scholar. Sayce's reading has been followed by no other editor.

Jensen, without comment, read Arad-Êa in his *Cosmologie*, 1890. Jeremias in the same year, a little later, followed Jensen; and again two years later, in Roscher's *Mythological Dictionary*, he read also Arad-Êa.

Prof. Jastrow followed in 1898, reading Ardi-Êa. The reading ardu for  has no warrant other than its being a synonym of amêlu. The reading amêlu for  is certain. The only reading, therefore, warranted by known information is Amêl-Êa.








The name of the boatman occurs six times in tablet X., written always   (ur followed by the sign with *four* heads). In tablet XI. the name occurs ten times, but the readings here do not agree. Column vi. lines 1 and 32 read , five heads; line 14 of column vi. <<<, three heads [Haupt's Texts]. The name of the boatman of the ark in the time of the Deluge is commonly read Puzur-Bêl or Puzur Shadû-Rabû, "the one hidden from Bêl;" written    .

Now I mean to defend the following theses:





1. The original name of the boatman of the ark was Amêl-Bêl.

2. This was changed to Puzur-Bêl, for theological reasons, by the priests.

3. The name was changed to Amêl-Êa by the same influence.

It has been assumed on the basis of R. 44, 48c that the sign , with five heads, can be read Êa; but this is based only on the reading Amêl-Êa for  , that is, only in connection with this name. Now the readings Êa for  and Bêl for  are already clearly established. If, then, the popular name of the boatman in the original legend, Amêl-Bêl, with five heads, was changed to Amêl-Êa by the dropping of one head, it would not be unnatural for the reading Amêl-Êa to be given to the old way of writing, viz.  , by the scholars who composed the syllabars. This would account for the mistaken reading in R. 44, 48c, quoted by Brünnow. The old reading Amêl-Bêl again occurs twice in Prof. Haupt's texts, which would prove either one of two things: (1) a cropping out of the traditional folk-name of the boatman, or (2) the giving of the name Amêl-Êa to the old reading without changing the reading itself.

In tablet XI. the story is told of how Bêl and other gods of the pantheon planned to destroy all men. Êa foils the plot by causing a boathouse to be built, and saves at least three persons, Šit-Napishtim and his wife, and Amêl-Êa the boatman. The story has been worked over by the priests. The accurate measurements of the ark, the rules for uttering incantations over the sick hero Gilgamesh, the attributing of the deliverance of men to Êa, the father of Marduk, patron deity of Babylon, all point to priestly influence working upon an original folk-legend of the destruction of the world by water. Šit-Napish-tim's father is also called Kidin-Marduk in tablet IX. line 6.



In the plan of Êa, Bêl is deceived. The ark escapes his attention, it is literally "hidden from him" together with the voyagers, and thus Êa preserves men. By a slight change of the last sign, the part Bêl of the boatman's name is changed to Êa. If then, as I have supposed, the name was originally written  , either of two things may have occurred: (1) Either the priests played upon the sign  (as they had already upon the sign ) by using it as the last part of the epithet Puzur,


thus calling the boatman 'the one who was hidden from Bêl'; or (2) Pu-Zu is to be read as an ideograph meaning, perhaps "protection," and the translation of the lines would be, "To manage the ship I gave the boat together with its goods into the care of Amêl-Bêl the skipper." Col. ii. lines 38-39:

*a-na pi-hi-i ša elippi ana [Pu-Zu] Amêl-Bêl (amêl) malahu.
ekallu at-tu-din a-tili bu-še-ê-šu.*

This hypothesis accounts for the confusion of readings in tablet XI., and tends to confirm the argument already set forth by Professor Jastrow for the arrangement of the story both in toto and in detail, by priests who desired to carry out certain ideas in the Epic of the Zodiac.

The history of the word then would be:

1. Popular name in the old legend, Amêl-Bêl .
2. Perhaps changed later under priestly influence to Puzur-Bêl (written also with the epithet "shadû rabû" for Bêl).
3. Changed permanently to Amêl-Êa .

Weight is also given to the theory that ur was the original first part of the name, and was used purposely as the last part of Puzur; inasmuch as the form  is rarely written in the construct with double u, and in the other case where puzru is used in a proper name (Puzur-Ashur), the construct state is written with the usual form Pu-zur.

Specimens of the Popular Literature of Modern Abyssinia.

—By DR. ENNO LITTMANN, Princeton University, Princeton, N. J.

AMONG the popular works written in the modern Semitic languages of Abyssinia, there are many which are of interest to us, while some are even of considerable importance. I give here extracts from a few compositions of this nature, written in dialects of Northern Abyssinia.

The first of these is a small book in the Tigray language, entitled, "Story of the Journey of an Ethiopian from Ethiopia to Italy," which was printed in the year 1895 in Rome. It is a very simple and natural tale of an African who never had left his country before. Its scientific value is mainly philological, but it interests us also from a human standpoint. In order to give an idea of the style in which the author, Fesha Giorgis, writes, I translate the passage where he describes his departure (p. 6, l. 10-24); adding, however, that in a few places the translation is not absolutely certain:

"Then I took leave of my friends and acquaintances. Some of them tried to keep me back(?), and some of them said unto me: 'You have been persuaded.' But I, having now decided to go, replied nothing to the talk of the people. And in the evening I started, according to the order of the major, to go to the steamer. And some of my friends accompanied me and came to the seashore, and there we took leave of one another. But when the separation took place, my nature trembled, and two of my friends began to weep together. When that happened we embraced each other again and I stepped into the boat. Until I reached the steamer, they stood on the seashore, to see me off. But I then, while turning my face towards them, until I came to the vessel, was not embarrassed. And when I had come on board the vessel, I waved to them with a white handkerchief. And they went away sad."

Going on, he describes his experiences in the Red Sea, the Suez Canal, the Mediterranean, where he has a very queer and disagreeable feeling, called with us sea-sickness; and finally in Naples and Italy.

Of quite a different character are two collections of texts in the Tigrē language, which are of great interest both for the history of the Semitic languages and for the history of Semitic thought and civilization. In the first place, a collection of tribal legends (*Stammessagen*) of the Tigrē people was published by Dr. Conti Rossini, in the *Journal of the Italian Asiatic Society*, 1901, under the title, "*Tradizioni storiche dei Mensa.*" The reading of these texts reminds us strikingly of the tribal legends of the Israelitic clans in Canaan. Each tribe derives itself through a long line of ancestors from a heros eponymos, who in a manner is a personification of the tribe. This is shown also in an interesting way by a fact of grammar, as follows: two prominent tribes of the Tigrē are *Mensā'* and *Māryā*, but their tribe heroes are *Mense'āy* and *Māyrāy*; that is to say, the adjective form expressing derivation or appurtenance is employed, just as though we had *יִסְפִּי* or *יַעֲקֹבִי* as names of persons, instead of *יִסְפָּר* and *יַעֲקֹב*, in the Old Testament. The single heroes are then as usual brought into relation to each other as brothers, cousins, father and son, and so forth. We see thus before our eyes, and in a mainly Semitic people, a process in development which in a similar way took place many centuries ago in the Hebrew nation. Of course traditions more or less like these are spread over almost all the earth, and on the other hand it is a little dangerous to compare times so remote from one another. But the Semitic character is so tenacious, and the elements of Semitic civilization, such as found for instance with the Bedouins, change so little in the course of time, that we are led to comparison wherever we find similar traces.

As a specimen of the Tigrē traditions I give here the story of *Mense'āy* and *Māyrāy*, the ancestors, or better, the representatives, of the *Mensā'* and *Māryā*:

"*Mense'āy* and *Māyrāy*, without dividing the estate of their father, left [their brothers] *Tör'āy* and *Hazötāy* and went to *Haigat*. And after that, they went out from *Haigat* to spy out the land, saying: 'Which will be the best for us?', [and they went] to *Erötā*. And after they had gone to *Erötā*, *Māyrāy* said unto *Mense'āy*: 'In this *Erötā* let us dwell, it is good.' And after that said *Mense'āy*: 'How can we dwell in this drought in preference to the two rainy seasons and the two harvests and the

two birth-times of the kine, [which are in Haigat]?’ So he went down [thither] with his brother. And after that the mule of Mäyrāy strayed, after they had gone down to Haigat. And Mäyrāy and Mense‘āy sought for the mule both of them together. And when they went after her, she was waiting for them in Erötā. Mäyrāy said unto his brother: ‘Thus hath the mule brought us again to our goal; let us dwell [here].’ And as he did not yield to him, they parted. Mäyrāy settled in Erötā and Mense‘āy returned to Haigat. And each of them in his place begat children and grew rich. And when Mense‘āy longed for his brother, he went to see Mäyrāy; and Mäyrāy likewise longing for his brother, went to see Mense‘āy; and they met in Kadnat. And in the dark, each believing the other an enemy, they struck each other [with their lances]. But crying: ‘This is my man, I am Mense‘āy!’ and: ‘This is my man, I am Mäyrāy!’ they recognized each other, and embracing they expired together. And they were buried in Kadnat.” The end of this story is based on the same element as the widespread legend of the two fighting brothers,¹ very closely related to that of the battle between father and son (Rustem and Zohrab, Hildebrand and Hadubrand).²

The second of the Tigrē collections is found in a manuscript sent to me this winter from Abyssinia containing 214 songs in the Tigrē language. It is the first collection of any size of Semitic popular poetry, excepting those in the Arabic language. Like the “*ḏiwān beṇi Hudhail*,” we might call this a *ḏiwān wclād Tigrē*. The poems furnish very valuable material for linguistic, metrical and ethnological studies. The first texts in Tigrē—the translation of the Gospel of St. Mark and of some Psalms, the *Tradizioni* published by Conti Rossini, and also these poems—are all of them the fruit of the industrious zeal of the Swedish missionaries.

Mr. Sundström, one of these energetic and indefatigable men, sent me also an introduction in Tigrē and Swedish to the first

¹ Cf. Eteokles and Polyneikes, Hildibrand and Asmund, and the Scotch ballad, ‘The twa Brothers’ (Child, *The English and Scottish Popular Ballads*, No. 49).

² Cf. the exhaustive treatment of these questions by Dr. Busse, *Sagen-geschichtliches zum Hildebrandsliede*, in *Beiträge zur Geschichte der deutschen Sprache und Literatur*, xxvi., Halle, 1900.

poem, and copious notes in Swedish on the poem itself. Of introduction and poem I present here an English translation:

After the death of a certain chieftain, named David, a quarrel arose about the leadership; for the surviving son (Maḥammad) was said to be a weakling, whom they did not desire for a chieftain. It is a custom for the chieftain to have a special strong-sounding drum, at the sound of which all the male population of the village must gather at the council place, if any important matter is to be transacted. Without this drum no one can rule. Therefore the rival party succeeds, after some intrigues, in getting the chieftain's drum; and, while the legitimate successor is sleeping, installs its man as chieftain, and the drum sounds. The son of David wakes up, seizes the formidable sword Qaṭṭān, jumps over the enclosure of his house, and stands suddenly on the council place. He cleaves the poor drummer with the flashing Qaṭṭān, and then turns around to the bard, who is just singing the praise of the newly installed chief. Death before his eyes, the bard now sings, to save his life, the following song:

1. Not shall be despised in songs this Maḥammad, the son of Ġadāl.
2. His mother is not a slave, nor is his father a serf.
3. His mother is the legitimate wife and a princess; his father is king and ruler.
4. He is the offspring of Fekāk, the offspring of Nāwed; he takes tribute from the free as well as from the tributary.
5. He is the offspring of Claudius, the offspring of Theodoros; he keeps back warriors, horse and foot.
6. He is the offspring of 'Eġġēl, the offspring of Ekked; the offspring of the strong owner of Qaṭṭān, [the precious sword].
7. He is the offspring of Ġāweġ, the offspring of Fekāk; the offspring of the strong chief, whom all obey.
8. He is a dark shouldered lion's whelp, no lynx nor hyæna.
9. He is [like] an irritable camel, that does not allow his nose to be pierced.
10. He is [like] a strong high-humped camel, that snorts wildly.

11. [Strong] like Mafarraḥ's boat and like the firm house of Gaḥtān's son.
 12. He is [like] the moon in the firmament; and [if he were] flour on the millstone,
 13. Who could make it to bread and eat it? It were a deadly poison.
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After the manuscript of the preceding had been sent in to the editors, I received a more complete version of this same poem, with more notes and a Tigrē-Swedish vocabulary by M. Sundström. An edition of this very valuable piece of work with a translation of the whole into German will soon be published.

Notes on the Old Persian Inscriptions of Behistun.—By
LOUIS H. GRAY, Princeton University, Princeton, N. J.

Bh. i. 65, *viθaibiš* 'omnia.'

ONE of the most difficult cruxes in the Old Persian inscriptions is the passage Bh. i. 64–66, *adam niyaθārayam kārakhyā abičariš gaiθāmčā māniyamčā viθibiščā tyādiš Gaumāta hya maguš adinā*. Two years ago, in *AJPh.*, xxi. 16–18, I suggested as a translation of these words: 'I restored to the people the servants(?), and the live-stock(?), and the real estate, and the private property(?), of which Gaumāta the Magian had deprived them.' While the article mentioned was in press, a paper by Justi treating of the same passage appeared in *ZDMG.*, liii. 89–92. He rendered the crux by 'das Besitztum, die Dienerschaft, Hof und Haus nahm er ihnen.' He adopted the reading (*h*)*abāčariš* instead of *abičariš*, with which I have been unable to agree, despite Rawlinson, *JRAS*, O.S., xii., p. ii., and he compared *māniyam* with the Cretan gloss of Hesychios, *μῶνα* · *δουλεία*, instead of YAv. *umāna*, GAv. *dəmāna* (cf. *AJPh.*, xxi. 17). Justi's conclusions were criticized by Foy, *ZDMG.*, liv. 341–355 (cf. also *KZ.*, xxxvii. 551–553), who returned to the reading *abičariš*, which he, however, like Spiegel,¹ connected with New Persian *čarīdan* 'to pasture' and translated 'Weideland,' while he rendered *māniyam* by 'Gebäude.' After a renewed study of the passage and careful reading of the contributions of Justi and Foy, I find myself still adhering to my old view concerning *abičariš gaiθāmčā māniyamčā*. With regard to the fourth word, read *viθibiš* by Weissbach and Bang, I have changed my explanation materially. My old rendering 'private property(?),' *AJPh.*, xxi. 17–18, where former interpretations are collected, is criticized by Foy, *ZDMG.*, liv. 374, but his own discussion of the word, 349–355, seems to me altogether untenable. From the *vⁱθ^ab^aiš^ačā* which Foy adopts instead of *vⁱθ^aib^aiš^ačā* he evolves *vⁱ(i)θ^ab^aiš^ačā* or *vⁱ(i)θ^ab^aiš^ačā-čā*, i. e., *vⁱ(i)θ^abⁱš^ačā-čā* or *vⁱ(i)θ^a-čā*.

¹ Bartholomae, *Altiran. Wtb.*, 1889, favors the same etymology.

bišaçaš-čā, 'Geschlechtsgefolgschaft (das sind: "die Gefolgsleute der adligen Häuser").' With a conjecture at once so bold and so unnecessary I cannot agree.

I believe that the true reading and root-meaning of *vⁱ(i)θ^aib^aiš^ačā* is that which is adopted by Bartholomae, *Grundr. der iran. Philol.*, i. 226, *viθaibiščā*. This view I have already put forth in *JAS.*, xxi. 181-182, when discussing the phrase *hadā viθaibiš bagaibiš*, which I believe to mean 'with all the gods.' Foy, 350, raises an objection to the form adopted by Bartholomae and myself, but his remarks seem open to criticism. 'Vor allem spricht dagegen,' he writes, 'dass *vⁱθa-*, *vⁱisa-*, *vⁱispa-* "all" stets plene geschrieben ist und nur *vⁱ(i)θ-* "Haus, Heimat, Geschlecht" in der Behistaninschrift stets defektiv. Da nun sonst keine andren Wörter ausser Namen defektiv geschrieben werden, so muss im Anfang von *vⁱθ^aib^aiš^a* das Wort *vⁱ(i)θ-* "Haus, Heimat, Geschlecht" stecken.' Why the orthography of the proper name *Vištāspa*, to which Foy evidently alludes, cannot be called into service here, I do not see. The Behistun inscriptions shows the scriptio defectiva *vⁱ(i)štāspa* in all instances of the word (cf. Rawlinson, *JRAS.*, O.S., x., pp. xl., lxx.). Contrariwise, in all other inscriptions (excepting the late text Art. Pers. a 19), namely, Dar. Pers. a 4, Dar. Pers. c 4, Dar. Elv. 19, NR. a 12, Sz. b 6, Art. Sus. a 3, we have the scriptio plena *vⁱštāspa* throughout. In exactly the same way the Behistun text has the scriptio defectiva *vⁱ(i)θ^aib^aiš^a*, i. e., *vⁱθaibiš*, while Dar. Pers. d 14, the only text other than the Behistun inscriptions where the word occurs unmutilated, shows the scriptio plena *vⁱθ^aib^aiš^a*, i. e., *vⁱθaibiš*. I have, therefore, no hesitation in adopting Bartholomae's reading *viθaibiš* on the analogy furnished by the double orthography of the name of Hystaspes.

I now turn to the meaning and construction of the word. The rendering is fixed, I think, by the phrase¹ *hadā viθaibiš bagaibiš* 'with all the gods,' Dar. Pers. d 14, 22, 24. It is plain, furthermore, from previous discussions of the passage, that *viθaibiščā* is parallel in construction with *abičuriš gaiθāmčā*

¹ Tiele, *Geschiedenis van den Godsdienst in de Oudheid*, Amsterdam, 1901, p. 361, maintained the old view still, as he wrote: '*hadā bagaibiš viθaibiš*' bedeuïdt zeker 'met de goden van den stam,' of misschien 'van het (konings-) huis.'

māniyamēā. Bartholomae's earlier view, *Ar. Forsch.*, ii. 104, that the word is an instrumental plural used as an accusative, is the one which I hold now as I held it in my former paper (cf. also my explanation of the instrumental plural *rauēabiš* as a nominative in *xiv. rauēabiš θakatā āha* '14 days were in course' and similar phrases, *AJPh.*, xxi. 10). My 'kühne und bequeme Annahme,' as Foy, 374, calls it, that the instrumental plural may be used as an accusative and nominative, is not without arguments in its favor. It seems to me almost impossible to deny that the Iranian possesses many other instances of this very usage. Collections of material on this subject may be found in Hübschmann, *Caususlehre*, 265-66, Spiegel, *Vgl. Gr.*, 428-429, Jackson, *Av. Gramm.*, § 944 (unpublished, read in proof-sheets). That these forms, e. g., *Av. staotaiš, dāman sraēštāiš, dāman awyāiš, dāman vīspāiš, satāiš, vaēdyāiš*, are real instrumentals¹ and not, as Johannes Schmidt, *Pluralbild.*, 259-275, argued, forms with a nominative-accusative neuter plural suffix -iš seems clear for several reasons. First, not only neuters but masculines are found in this construction, e. g., *xrafstrāiš, azl-ibīš, adzabīš*. Second, Schmidt himself, 272-273, admits that such a formation in -iš is unknown outside the Iranian. Third, the instrumental plural used as nominative-accusative agrees with the use of the instrumental singular as nominative (cf. Caland, *KZ.*, xxxi. 259-261, Geldner, *ibid.*, 319-323, Bartholomae, *Sprachgesch.*, ii. 124-125, *Grundr. der iran. Philol.*, i. 134, Jackson, *Av. Gramm.*, § 945 [unpublished]). Fourth, the syntactic usage may, I believe, be explained more easily than Delbrück, *Vgl. Synt.*, i. 232-233, seems to think.

For the use of the instrumental singular as nominative, Bartholomae, *Sprachgesch.*, ii. 124-125, has, in my opinion, found the correct explanation. Other Indo-Germanic dialects offer parallels for the employment of the instrumental as accusative. The germ of the usage in Iranian is to be found in such phrases as *Vd. 6. 49, kva narəm iristanəm azdibīš barāma ahura mazda kva nīdāthāma* 'where bear we the bones of dead men, O Ahura Mazda, where deposit them?', *Vd. 4. 5, θriš satāiš haδa-ēiθanəm*

¹ The instrumental plural seems to be used at least once in the *Gāthās* as a nominative, *Ys. 28. 2, āyaptā ašāt haδā yāiš rapantō daidīt x"āθrē*, 'boons in accordance with righteousness which are to place the rejoicing ones in glory.' The passage is not, however, altogether certain.

narān nabānazdištānān para-baraiti 'he brings three hundred like penalties to the nearest kin.' From phrases like these comes the later complete equivalence of instrumental and accusative, e. g., Ys. 55. 1, *rīšrā gēθāšēa tanrasēa azdāhīšēa uštān-mēa kahrpasēa tēvīšīšēa baodasēa urvānānēa fravāšimēa pairiēcā dadāmahī āēa vāēdagamāhī* 'all creatures and bodies and bones and frames and forms and power and intellects and soul and fravashi we both exalt and proclaim,' Yt. 8. 33, *avi asā avi šōiθrā avi karšvān yāiš hapta* 'over seats, over abodes, over the seven zones.' The Slavic and Germanic dialects offer close parallels to this usage. Slavic especially employs the instrumental of means with verbs of motion used intransitively which take the accusative when they are transitive. Thus we have Old Church Slav. *vīši narodŭ verže kameniženŭ* 'omnis populus jecit lapidibus' beside *vrŭzi kamenŭ na nŭga* 'τὸν λίθον ἐπ' αὐτῇ βάλετω.' The usage is less common in Germanic, although instances are not lacking in Gothic, Old Norse, and Anglo-Saxon, e. g., Goth. *uswairpan imma ut us þamma weina garda*, 'ἐξέβαλον αὐτὸν ἔξω τοῦ ἀμπελώνος,' Mark 12. 8 beside *utwairpandans ina ut us þamma weinagarda*, Luke 20. 15. Examples of the use of the instrumental beside the accusative are found also in Greek and in Sanskrit. For further literature and examples I may refer to Delbrück, *Vgl. Synt.*, i. 257-260, Audouin, *Déclinaison dans les langues indo-européennes*, 19, 85-86, 179, 273-274, 371, Miklosich, *Vgl. Gramm.*, iv. 695-700. It seems to me, therefore, that we are fairly entitled to assume that the functions of the instrumental of means approximated those of the accusative of the direct object in connection with certain verbs in Iranian as well as in Sanskrit, Greek, Germanic, and Slavic, and that by analogical extension the instrumental was frequently substituted for the accusative both in Old Persian and in Avestan. The syntactic usage which I here presuppose does not, therefore, rest merely on its likeness to that of the Avesta, where corrupt transmission of text may frequently be a source of seeming abnormality in syntax, but on the broader basis of comparison with other dialect-groups of Indo-Germanic. I also regard *viθaiibiš*, for reasons stated above, as meaning

¹ I purposely omit instances of the accusative after $\sqrt{bār}$ as being too frequent to require notice.

'all,'¹ and I accordingly now render Bh. i. 64-66, 'I restored to the people the servants(?) and the live-stock(?) and the real estate and all things(?) of which Gaumāta the Magian had deprived them.'

Old Persian *tuwam kâ*: Doric *kā*.

The phrase *tuwam kâ* is found five times in Old Persian, Bh. iv. 37, 41, 67, 70, 87. Its Babylonian equivalent is *mannu attu* 'quisque tu,' Bh. 105, while the New Susian has *ṁni ṁakka* 'tu qui,' Bh. iii. 63-64, 66, 83, 84, 94. The old explanation of *kâ* as a vocative singular masculine (e. g., Spiegel, *Keilinschr.*², 213) can hardly be maintained, and Kern's view in Caland, *Synt. der Pron.*, 47, that *kâ* . . . *hya* is the Old Persian equivalent of Sanskrit *yathā kaccit*, seems equally untenable. Bartholomae, *Literaturbl. f. or Phil.*, i. 17, *Grundr. der iran. Philol.*, i. 235, is on the right track when he regards *kâ* as a particle. On the other hand, it does not seem to me that *kā* is equivalent in meaning to *γε* or is even a mere interjection as he has suggested. The Old Persian word is rather to be compared with what I regard as its exact correspondent in Greek, Doric *kā*, Indo-Germanic **gā* (cf. Brugmann, *Gr. Gr.*³, 543-544). A few examples will be sufficient to show that *kā* has, sometimes at least, a generalizing force. Theok. xi. 49, *τίς κα τῶνδε θάλασσαν ἐκὼν καὶ κύμαθ' ἔλοιτο*; xviii. 57-58, *νέυμεθα κᾶμμες ἐς ὄρθρον, ἐπεὶ κα πρῶτος δοῦδος ἐξ εὐνᾶς κελαδήσῃ ἀνασχὼν εὐτρίχα δειράν* or Arist. *Acharn.* 799, Δ. *τί δ' ἐσθίει μάλιστα*; M. *πάνθ' ᾗ κα διδῶς*. I therefore think that such a phrase as *tuwam kâ xšāyaθīyā hya aparam ahy*, Bh. iv. 37, should be translated, 'thou whosoever shalt be king hereafter.'

Bh. iv. 44: RV. ii. 17. 7.

Weissbach-Bang's reading *Auramaz[diya] taiyiyā* in Bh. iv. 44 is very doubtful. Rawlinson's copy (cf. also *JRAS.*, O.S., x. p. lix.) has merely *Auramaz[dā]* and a blank space. On this

¹ Old Persian *viθa* is to be compared with Old Church Slav. *viśi*, Lithuanian *visas*, Indo-Germanic **wik-o-*, while I still hold to my former explanation of Old Persian *visa* beside *vispa*, Indo-Germanic **wik-ya-* as due to *sp>s(s)* (*AJPh.*, xxi. 7, see now Salemann, *Grundr. der iran. Philol.*, i. 263). With the view of Foy, *KZ.*, xxxvii. 533, that *visa* is from Indo-Germanic **wis-ko-*, I am quite unable to agree.

he remarks, xii., p. vi., 'The word between *Auramazdā* and *yathā* is certainly either *maiīyā* or *taīyā*, the initial character being the only one subject to doubt.' Spiegel reads accordingly *Auramaz[dā] taīyā*. Fr. Müller, on the other hand, *WZKM.*, i. 59-62, preferred *Auramaz[dā] maiīyā*. Neither the New Susian nor the Babylonian texts help us here. The Babylonian *issā* (Bh. 98) would seem to point to *upastā* or *upastām* in the Old Persian version, but according to Rawlinson's copy there is no room for such an insertion. On the other hand, the New Susian text (Bh. iii. 68) does not here contain *piktu*, the equivalent of *upastā*. Perhaps the *Urmašta-ra* of the Susian tablet would lead us to infer some such form as the *Auramazdiya* adopted by Weissbach-Bang (cf. also Weissbach, *Achämenideninschr. zweit. Art.*, 53-54, Oppert, *Le peuple . . . des Mèdes*, 56-57, and against this Foy, *ZDMG.*, lii. 565, whose suggestions, however, both here and in *KZ.*, xxxvii. 539, I am quite unable to accept). In my own judgment it is possible to retain unchanged the reading of Rawlinson, especially since the Babylonian and New Susian versions do not exactly coincide in the passage under discussion.¹ My own suggested reading of the text is *auramaz[d^aam^a. īy^aīy^a.]*, i. e., *auramaz[dām īyāiy]*. This preserves exactly Rawlinson's final results, it may be explained grammatically, and it seems to keep the general sense demanded both by the context and, apparently, by the Babylonian and New Susian versions. In my view *īyāiy* is the first singular middle of *ī* 'to go,' where the termination is the same as in the imperfect (cf. for the present GAv. *dadē* 'I place,' YAv. *daide*, Skt. *dadhe*, and for the imperfect Old Persian *avaīy* 'I carried,' Av. *baire* 'I bore,' Skt. *avahe* 'I carried'). The passage *auramazdām īyāiy yathā ima hašiyam naiy duruštam* then signifies, 'I betake myself to Ormazd as this is true, not false,' or, more freely, 'I call Ormazd to witness that this is true, not false.'² If the reading and interpretation here suggested be possible, there is an interesting parallel in RV. ii. 17.

¹ Several other instances of slight divergence in the different versions of the Achaemenian inscriptions are too well known to require recapitulation here (cf. Weissbach, *Grundr. der iran. Philol.*, ii. 73-74).

² My previous rendering, *JAOS.* xxii. 172, should be changed accordingly. I still think it just possible, however, that *yathā* here introduces a clause of indirect discourse.

7a which should be cited in this connection. The Vedic passage in question contains the sole instance thus far noted of the first singular middle of *i* in Sanskrit. The line is as follows: *amājār iva pitrōḥ śacāḥ satī samānāt ā sūdasas tvām iye bhāgam* 'as a girl maturing at home dwelling with her parents, from the joint abode I betake myself to thee for weal.' The words *tvām iye bhāgam*, which are important for the suggested reading of the Old Persian passage, are thus glossed by Sāyaṇa: *stotāham bhagam bhajanīyam dhanam tvām iye . . . tvām yāce*. I see no very great semantic difficulties in a development of meaning from 'I go, betake myself, to Ormazd' to a practical equivalent of 'I call Ormazd to witness, so help me Ormazd.' Certainly all epigraphical and grammatical requirements seem to me to be met by such a suggestion.

Bh. iv. 46, *avāt*.

The general sense of Bh. iv. 46 is clear both from the Old Persian and New Susian versions, the Babylonian being lost here. The third word of the line in the Iranian text is, however, mutilated and doubtful. Rawlinson in his copy reads this word and the one before it *aura[mazdāha. tyu]mīya* (cf. also *JRAS.*, *O.S.*, x., p. xviii., lix.-lx., 247), but in his revisional note (xii., p. vi.) he says that the last four characters are certainly *amīya*^a. Weissbach and Bang read *api]māiy*, thus substituting *i* for Rawlinson's *a*. But this can scarcely be the intensive *api* (cf. their translation by 'auch'), for that word occurs in the inscriptions only as an enclitic in the single phrase *duraiy apiy* or *duraiapiy*. I would suggest the reading *avā*, which thus gives *avāmāiy*. This *avā* is the ablative singular neuter for **avāt*¹ governed by *amiyašcīy*, which should take the ablative in Old Persian as it does in Avestan and Sanskrit (cf. Jackson, *Av. Gramn.*, § 965, n. 1 [unpublished, read in proof-sheets], Speijer, *Sansk. Synt.*, 78-79, Delbrück, *Vgl. Synt.*, i. 216). The meaning of *māiy* is fixed by the New Susian rendering

¹ On the loss of final *t* in Old Persian see Bartholomae, *Grundr. der iran. Philol.*, i. 183, Foy, *KZ.*, xxxvii. 500-501. In passing I may note regarding Foy's criticism of my view of *tyanā*, Bh. i. 23, as expressed in *AJPh.*, xxi. 12-13, that *datā* is evidently plural, not singular (cf. the Babylonian rendering *dēnātu*, Bh. 9). We should therefore expect *tyānā* instead of *tyanā* if his view were correct.

ānena (Bh. iii. 70) and the enclitic pronoun thus stands in its proper position after *avāt*. The passage Bh. iv. 46–47, *vašnū awa[mazdāha aw]āmaiṣ anīyaščiṣ vasiyastiṣ kartam awa awahyāy[ā dīpiyā] naiṣ nipšitum* is then to be rendered, in my judgment, ‘by the grace of Ormazd much more than this was done by me. This is not written on this tablet.’

Old Persian *duvitātaranam* : **Old Church Slavic** *davž*, **Greek** *διψ*.

The word *duvitātaranam* occurs twice, Bh. i. 10, a 17, in the Old Persian inscriptions in passages where no help is given by the Babylonian or New Susian versions. The latter text has indeed (Bh. i. 7) *šamuk-mar* corresponding to *duvitātaranam*, but as the New Susian word also is a *ἀπ. λεγ.*, it is useless for interpretation (cf. however, Foy, *ZDMG.*, lii. 590). Early conjectures on the meaning of the Iranian term are collected by Spiegel, *Keilinschr.*, 83–84. The second component is obviously to be compared, so far as etymology goes, with Sanskrit *tarana* ‘crossing’ (so already Benfey, *Keilinschr.*, 8). The word seems to mean ‘for a long time, from days of old’ (cf. Justi, *Grundr. der iran. Philol.*, ii. 417 and his references there; see also Rawlinson, *JRAS.*, O.S., x. 197, Benfey, *Keilinschr.*, 8). Bartholomae, *Grundr. der iran. Philol.*, i. 151, returns to the older rendering, best defended by Oppert, *Le peuple . . . des Mèdes*, 113, 163, and adopted by Weissbach and Bang, ‘in doppelter Reihe.’ The historical difficulties in explaining the passage if *duvitātaranam* has this meaning, are too considerable so be lightly overlooked. I incline, therefore, to the rendering ‘from time of old,’ especially as I think this can be justified etymologically. The latest discussion of *duvitātaranam* is by Foy, *KZ.*, xxxvii. 546, who still adheres to his comparison with Latin *dinturnus*. Such an equation seems to me impossible. Whether Latin *din* ‘by day, long’ stands for **dion-i* or for **diēu* (cf. Brugmann, *Grundr.*, i.² 910, Stolz, *Lat. Gramm.*, 131, Sommer, *Lat. Laut- und Formenl.*, 160), it seems clear, at any rate, that just as *din-rnus* is after the analogy of *noctur-nus* conceived as **noctu-rnus* (Stolz, 77), so *din-turnus* is analogical to the same *noctur-nus* divided **noc-turnus*.¹ With *dinturnus*, then, *duvitātaranam* has nothing to do.

¹ For further hints on the influence of *nox* on *dies* in Latin, see Sommer, 429, Schrader, *Reallexikon*, 845–846.

The first component of the Old Persian word is to be compared with Greek $\delta\eta\theta\acute{\alpha}$, $\delta\eta\rho\acute{o}\nu$, $\delta\acute{\eta}\nu$, Doric $\delta\omicron(\rho)\acute{\alpha}\nu$ (Alkman, frag. 135, ed. Bergk),¹ El. $\delta\acute{\alpha}\nu$, O. Ch. Sl. *davě* 'formerly,' *davīna* 'old,' Armenian *terem* 'I continue,' Latin *dū-rus*, *dū-dum*, Sanskrit *dū-rá* (see Fick, *Vgl. Wtb.*, i.² 624, ii.² 383, Hirt, *Abhand.* 104, Hübschmann, *Armen. Gramm.*, i. 497, Prellwitz, *Etm. Wtb.*, 74, Brugmann, *Gr. Gr.*² 251). The same phonetic change is found in this equation as in the comparison of Old Persian *duvītīya* 'second,' with Sanskrit *dvitīya*, Greek $\delta\acute{\iota}\varsigma$, Old Latin *duis* (Pauli excerpta ex Festo, ed. Th. de Ponor, 47). I consequently feel little hesitation in rendering *duvītātaranam* 'throughout a long period.' I think, furthermore, like Foy, that we are entitled to compare the Old Persian word with the Vedic *dvitā*. Geldner, *Ved. Stud.*, iii. 1, has very recently expressed himself as unfavorable to this view, apparently on semasiological grounds. Yet it would seem that the underlying force of *dvitā* as he has outlined the usage of the term, 1-10, may well have been 'long, continuous, firm,' whence were derived the meanings he assigns the word on a basis of Vedic philology and the native commentators. Until a better etymology shall have been suggested for *dvitā*, I should certainly prefer to compare it with Old Persian *duvītātaranam*, and both these words with Old Bulgarian *davě*, Greek $\delta\acute{\eta}\nu$, and their cognates.

¹ For $\delta\acute{\eta}\nu$ = * $\delta\epsilon\eta\nu$ cf. β 36, $\omicron\upsilon\delta'$ $\acute{\alpha}\rho'$ $\epsilon\tau\iota$ $\delta\acute{\eta}\nu$ $\eta\sigma\tau\omicron$. The phrases Armenian *i tevoy* 'forever' and Old Bulgarian *izŭ davīna* 'from olden time' may also be noted in this connection. Cf. further Kern, *ZDMG.*, xxiii. 222-226, Osthoff, *Etym. Parerga*, i. 114-115.

The Āradā-tilaka Tantra.—By DR. ARTHUR H. EWING,
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DR. RĀJENDRA LĀLA MITRA once expressed the opinion that the Tantras constitute the life and soul of the modern system of Hinduism.¹ While Tantra literature has made its way all over India from Tibet to Madras, it is chiefly to Bengal that it owes its origin. The writer just quoted, in his "Notices of Sanskrit MSS.," vol. iii. p. xiv, points out that the Tantras have always held the field against the Vedas in the province of Bengal. Bengali Pundits have no Vedic MSS.; this he believes to be due to the fact that "Bengal has never been the seat of a Vedic School, and consequently it has never been taught there, nor MSS. prepared and preserved." These and other facts regarding the importance of the Tantras, especially in Bengal, are to be found in a recent pamphlet by Dr. K. S. MacDonald, of Calcutta, entitled, "Whether Tantra or Veda in Bengal?" The same writer has also published information regarding Tantric literature in N.W.P. and Oudh, in Mysore and South India, and other pamphlets are in the course of preparation regarding the said literature in other provinces.

The close relation of this branch of Sanskrit literature to the every-day religion of millions of Hindus, furnishes an adequate reason for careful inquiry into the contents of the various Tantric productions. Such inquiry is now being carried on under the leadership of Dr. MacDonald, at whose request work on the Āradā-tilaka was undertaken.

The Āradā-tilaka appears as No. 160 in Aufrecht's "Catalogue of Sanskrit MSS. in the Bodleian Library." He there gives a brief outline of the contents and adds, "Āradā-tilaka (Yāmala alone being excepted) holds the first place among the mystic books; and, unless I am mistaken, surpasses the rest in point of antiquity."

The Title.

The meaning which the word 'Āradā' is here intended to convey is not certain, but it is probably used as a name of

¹ Compare what is said in *Indo-Aryans*, vol. i. p. 404.

Saraswatī, who stands first in the list of deities worshipped in connection with various Mantras in the body of the book, i. e., from chapter vi. to chapter xxiii. The word Īradā is not found in the 108 Upanishads which are tabulated in Jacob's Concordance nor in the Amarakoṣa. It is, however, found as a name of Saraswatī in Trikāṇḍaśeṣa i. 1, 27. 'Īradā' is also the name of a kind of Sanskrit character, e. g., the Kashmirian Atharva Veda is written in the Īradā character. Here again the reference, as Weber has said, *IS.*, xiv., p. 405, is doubtless to Saraswatī, who is the tutelary goddess of speech and learning.

The Author.

At the close of the work, in chapter xxv., the author is stated to be Lakṣman, the son of Lakṣmī, who received it from Āṛi Kṛṣṇa, who received it from Vāruṇendra, who received it from Mahābala.

General Character of the Tantra and Points Worthy of Mention.

1. The Īradā-tilaka is practically free from reference to the licentious practices which, marking the so-called "left-handed" Āktas, have done so much to bring them into disrepute. The only exception is in the general references to the power of certain Mantras to bring women under control and to compel them to come where they may be wanted, e. g. ix. 100; x. 25, 70, 95, 96, 111, 145.

2. The Sāṅkhya-Yoga terminology prevails in the book; the last chapter is devoted to Yoga by definition, xxv. 1.

3. The larger part of the book is devoted to the making and handling of Mantras and Yantras. It follows from this that the work is full of sorcery practices, being therein the lineal descendant of the Atharva Veda. Sorcery appears in its beneficent and terrible aspects. On the one hand, the Mantrin, by proper practices, can obtain almost anything that the heart may wish; on the other hand, he can kill or enable a man to kill his enemy. This is the chief blot upon this Tantra.

The technical word for this sort of thing is given in xxii. 1, viz. *ṣatruvimardana*, or killing of enemies.

The Atidurga-Mantra of chapter xxii. has this as its definite purpose. Other Mantras also are used in the same way. The following are some concrete practices referred to:

(1) The Vāyu Yantra, buried by the door of an enemy's house at night, will bring about his death unless he makes haste to leave it, vii. 54, 56. Compare for a similar use and effect of other Yantras, xi. 63 and xxiv. 29 ff. What a magnificent situation this creates for a sort of reign of terror!

(2) An image, i. e., effigy of an enemy, is made of a certain kind of wood, and it is then cut to pieces, the enemy thus becoming "a guest of death" (Kālātithi), xi. 100, 108. See also xxi. 95 ff. The defeat and death of enemies are again and again attributed to the Mantra in xi. 62-128.

(3) A young deer is taken as a symbol of an enemy and then killed and flung away, xvi. 24. Cf. xvi. 90.

(4) A goat is taken as a symbol of an enemy and the goat is killed, xx. 129.

(5) Messengers are sent to take the life of enemies, xxiii. 94, 95.

(6) Agni is besought to kill a man, xxii. 142; indeed, chapter xxii. is so full of this sort of thing as to make quotation impracticable.

4. Aufrecht's opinion that Çāradā-tilaka surpasses the other Tantras in antiquity seems doubtful from the statement which the book gives of itself. In i. 4 its purpose is said to be to give the essence, *sāra*, of all the Tantras and the method of Yantras and Mantras. Such a claim could hardly be made unless other Tantras were in existence. In fact the book seems to be a compilation. Chapters vi.-xxiii. make up the body of the book and bear a common character. The early chapters establish the theory of Mantra formation and describe what is preparatory or collateral. In the same way the two closing chapters are additions regarding Yantras and Yoga. On the other hand, it may still be that of the Tantras now in existence the Çāradā is one of the oldest. Anything like accuracy here will depend upon further investigation.

Certain of the works classed as Upaniṣads clearly belong to the same stratum of literature as the Tantras, at least if Çāradā-tilaka be taken as a fair representative of the latter class. The Rāmapurvatāpaniṣa and the Nṛsiṅhapūrvatāpaniṣa Upaniṣads contain the same sort of material as the Çāradā does and both are equally far removed from the early Upaniṣads. Again, the use of the word Çakti in Ātharvaçiras, Kālāgnirudra, Haṁsa and Nyāsa Upaniṣads serves to locate them approximately in the same sphere of literary production.

5. An important feature of this Tantra is its references to the goddess Kuṇḍalī.

The Tantras, as is well understood, set forth the religion of the Çāktas, i. e. of those who believe in and worship the supreme female energy, i. e. Çakti. In this Tantra, Kuṇḍalī is the personal name chosen to describe this supreme Çakti, active both in man and in the universe.

The following are the chief references to her nature, her place and her activities:—

(1) On the one hand, she is identified with Çabdabrahman, i. 14, 55; she is called Paraçakti, i. 53; and Paradevatā, i. 56; xxv. 34; and Ādhāra-çakti, iv. 57; she is praised in many stanzas of chapter xxv. and given the attributes of all the gods and goddesses, xxv. 64 ff.; she is identified with Om, thus: Om equals Piṇḍa, Kuṇḍalī equals Piṇḍa, therefore the two are equal, and this is equivalent to identifying her with Brahman, xxv. 65.

On the other hand, her form is given as the form of a serpent, i. 54. Note that in Amarakoṣa *kuṇḍalin* is one of the synonyms for serpent.

(2) She dwells in the middle of the body (*dehamadhyagā*) of all living (breathing) creatures, i. 14.

Again she is manifested in the trunk of the body (*ādhāra*) as Paraçakti, i. 53. References to her coming forth from the *ādhāra* are found in xxii. 3, 49, 50. Again as Paradevatā she is said to dwell in the midst of a knot in the *ādhāra*, from whence the veins go out, xxvi. 34. Further in xxv. 67 she is said to move in the midst of the Suṣuṃṇā vein.

(3) She creates the world. This is put in the following ways:—First she is said to be multiplied (*guṇita*) in the bodies of all creatures, i. 56. Further, it is said that she, having awakened to the fact that she is endowed with the essence of all things, creates the Mantra-endowed world, i. 57. The details of the above declarations are then given. She manifests herself in all singles, all doubles, all triples and so on up to twelves, then in twenty-fours, then in thirty-twos, then in thirty-sixes, then in forty-twos and then in fifties. The various phenomena of the visible world are gathered under these groups, i. 58–109.

Again she is said to aid in the destruction of an enemy, xxii. 3. Further, she is said to go out by the Brahmarandra, xxii. 50.

Further, the origin of all letters is attributed to her. The

series is as follows:—*Ġakti*, *dhvani*, *nāda*, fire, half-moon, *bindu*, *parā*, *paḡyanṭī*, *madhyamā*, and *vāikhurī*, i. 110–116.

As to the origin of the name, this Tantra furnishes by inference a very interesting suggestion. In the construction of the *maṇḍapa* or temporary temple, given in chapter three, instructions are laid down that in each of the eight quarters, N., N.E., E., S.E., S., S.W., W., N.W., the earth should be scooped out in the shape of a *kuṇḍa*, e. i. a shallow earthenware vessel, iii. 48. Then in the center of each *kuṇḍa* the earth should be formed so as to represent the female organ (iii. 75), while in the center of this again a *piṇḍa*, or lump of rice or flour, should be placed to symbolize the male organ (iii. 78).

Now in iii. 90 the *kuṇḍa*-form is said to be the highest form of Prakṛti. May it not be confidently concluded that Kuṇḍalī is simply another name for Prakṛti? and that the name is taken from the *kuṇḍa* formed in the sacrifice? The *kuṇḍa* contains symbols of procreating power and becomes therefore a fitting type of world-creation and so gives the name to the Paraḡakti.

In describing the place of Kuṇḍalī above, her place in the *ādhāra* or *mālādhāra* was referred to. A question of some importance comes up here: Does *mālādhāra* in this Tantra refer to the mystical circle (*maṇḍala*) just above the genitals to which it is referred in Pañcatantra, or to the navel, which seems to be the meaning in the very Tantra-like Upaniṣad, Rāmāpūrvatāpanīya? While some of the above references are uncertain, they are, on the whole, best understood of the navel, especially the reference to a “knot” in the *ādhāra*, from whence the veins go out, xxvi. 34. To be sure, there is no necessary contradiction here, as the mystical circle above the genitals may easily include the “knot” of the navel. Another Tantra at hand corroborates the view that *mālādhāra* in Tantric usage means navel. Rāma Prasād, M.A., has translated for the Theosophists a Tantra which he calls The Science of Breath. He in his glossary naïvely says that the work is a single chapter of a lost book, entitled Ġivāgama. The so-called chapter is really a translation of the work Svarodaya (see PW.). In section 32 Kuṇḍalī is said to dwell in the navel like a sleeping serpent. The translator’s note regarding Kuṇḍalī is interesting, “Kuṇḍalī is that power which draws in gross matter from the mother-organism through the umbilical cord, and distributes it to the different places where the seminal Prāṇa gives it form. When

the child separates from the mother the power goes asleep. She is no more wanted now. Upon the supplies of the Kuṇḍali depend the dimensions of the body of the child. It is said that it is possible to awake the goddess even in the developed organism by certain Yoga practices." *Nature's Finer Forces*, p. 194.

The Philosophy of Mantra Formation according to Ćārādā-tilaka.

The starting-point is the Sat-cit-ānanda attribute-possessing (*saṃpūṇa*) Parameṣvara. From Parameṣvara *śakti* is produced—*succidānandanibhāvāt sakalāt* (i. e. *saṃpūṇāt*) *parameṣvarārād āste śaktiḥ*, i. 6. From *śakti* comes *nāḍa*, i. e. the nasal sound represented by a semicircle and here put apparently for unmanifested sound. From *nāḍa* comes *bindu*, i. e. the dot representing *amśvāra*, i. 7. This *bindu* possesses the qualities of the highest *śakti* (*paraśaktimayaḥ*) and is itself made up of three parts, viz., *bindu*, *nāḍa*, and *bījaṃ*. From the division of this highest *bindu*, manifested sound (*raja*) is produced. Sound which is thus created takes shape in letters and words. Letters and words form Mantras; hence Mantras incarnate, as it were, the power of Śakti, which is the power of Parameṣvara. The Mantras as infolding the power of Parameṣvara become the media of world-creation. Kuṇḍali, who is the supreme Śakti, is said to create the Mantra-endowed world. The five elements are said to have the five root-sounds as their cause, i. e. the elements are five because the letters are divided into fives—not the opposite, as one might more easily have imagined, ii. 10. The details of the explanation are so abundant as to be almost confusing. However, the above theory seems to be the idea at the basis of the details. It is easy to see the reason for such a theory. The Mantrin was determined to have his Mantras highly regarded and so he creates a theory according to which no power will be too great to attribute to them. Not that the idea originated with the Tantrics. Speech is a goddess of the Rig Veda and the power of *brahman* or the "holy word" was recognized from earliest times. The Tantras are in this matter but a degenerate offspring of an honored parentage. The Brāhmaṇa with his *brahman* is the grandfather of the Mantrin with his Mantra. The one is sacerdotalism with a strong inclination to sorcery; the other is sacerdotalism immersed in an ocean of sorcery.

Other matters worthy of mention are:

(a) the Nāḍīs or veins. These are said to be ten, the principal being *Īlā*, *Pīṅgalā* and *Suṣumṇā*, which are referred respectively to the left side and nostril, the right side and nostril, and the middle. The seven others are: 1. *Gandhārī*, to the left eye. 2. *Hastijihvā*, to the right eye. 3. *Pūṣā*, to the right ear. 4. *Alumbuṣā*, to the mouth. 5. *Yāgasvinī*, to the left ear. 6. *Chūṅkhinī*, to the anus. 7. *Kūḍā*, to the genitals.

Ten winds or fires are also given as present in the body, but it does not seem possible to locate them in the *nāḍīs*. They are *prāṇa*, *apāna*, *vyāna*, *udāna*, *samāna*, *nāga* (connected with vomiting or belching), *kāma* (winking), *dhanañjaya* (enlargement), *kṛkara* (sneezing), *deradatta* (yawning), i. 40-44.

As to *Suṣumṇā* several points are given. (a) It is the *prāṇa* which goes up from the navel in five sections (*pr.*, *ap.*, *vy.*, *ud.*, *sam.*) and therewith prevades the body, i. 43. (b) By way of the *Suṣumṇā* the *ātman* is united with the *Param-ātman*, iv. 24. (c) By the way of *Suṣumṇā*, *tejas* comes from its own place (*svasthāna*), i. e. the heart, iv. 88; cf. *Praṇa Up.* iii. 9. (d) *Suṣumṇā* is in the backbone, xxv. 29.

(b) Moving life is of three origins: (a) from sweat, (b) from egg, and (c) from the embryo-sack, i. 29 ff. and 38.

(c) The seven *dhātus* or constituents of the body are skin, blood, flesh, fat, bone, marrow, and seed, i. 34. In vi. 7 and xxiii. 84 the last named is omitted.

(d) The body is said to be ninety-six fingers long, xxv. 27. The *prāṇa* is said to abide twelve fingers from the navel; cf. the reference in *Amṛitabindu Up.* 32 to measurements by thumb-breadths, and my discussion thereof in "The Hindu Conception of the Functions of Breath," *J.A.O.S.* xxii. 264.

(e) The *Saṁskāras* in the history of the individual are as follows: *Garbhādhāna*, *puṁsavāna*, *sīmantonayana*, *jāta-karman*, *nāmakaraṇa*, *upanīṣkramaṇa*, *annaprāṇa*, *cāṇḍa*, *upanāyana*, *mahānām̐ya-mahāvratā*, i. e. *brahmacārin*, *upanīṣada*, *godānodvāhakān*, and *mṛti* (v. 60 ff.).

OUTLINE OF CONTENTS.

Chapter I. The chief purpose of the first chapter is to set forth the theoretic basis of the science of Mantra formation and use. The argument has been briefly stated above. The

Sāṅkhya terminology is used. Such terms as *tanmātras*, *tat-tvas*, *mahātattvas*, *manas*, *buddhi*, *cit*, *aharikāra*, *mahat*, *avyaktam*, *jñānendriyas*, etc., are used.

Chapter II. The subject of this chapter is stated to be to describe the utterance (*vyakti*) of sounds in the mouths of men. In other words, it is a natural progress upon chapter first. Sounds are said to be driven along through *Suṣumnā* by the wind or breath, their starting point having been the personified Śakti who, as Kuṇḍalī, dwells in the body (1).

Many gods and goddesses are named and are all called *sva-gaktis*, thus emphasizing the theory that sounds are creative forces (29-55). In an earlier verse (8) the vowels are called *śivaśaktimayas*, i. e., possessed of the power of Śiva.

From verse 56 the description of Mantras begins. They are divided (a) as to gender; (b) as to character into good and bad (*krūra* and *sāmya*); and (c) into ready for use—*siddha*—and those yet to be perfected—*sādhya* (56-62 and 130-131). The chief causes of Mantras being defective are (1) the too frequent occurrence of certain letters, and (2) the putting of said letters into the wrong place (111). A long list of defective Mantras precedes the above statement (63-110). Note that the restrictions are such that Mantra-making is not a matter to be lightly undertaken. They seem to have been made with a view to keeping the production entirely in the hands of a "Mantra Company, Limited."

The *Saṁskāras* for Mantra-formation are next given, and this is followed by a statement of the proper astrological conditions, and that again by a description of a magical diagram; cf. *Nṛsiṃha. Up.*, v. 2 (112-135).

The chapter ends with a description of the proper place, the food and the character of the Mantrin and also of the character of the disciple (138-154).

Chapter III. The subjects of this chapter are:

1. The preparation of the *āsana*, i. e., the ground where a sacrifice is to be performed (1-18).
2. Full details of the erection over the *āsana* of a *maṇḍapa* or temporary temple on the occasion of a religious festival; of the vessels used in the ceremony and the various grains put in them; and of the giving of food to the gods and demons (19-47).
3. The forming of *kuṇḍas* in the various squares of the *āsana* and a description of occult effects of the various shaped *kuṇḍas* (48-86).

4. The formation of *maṇḍulas* or charmed circles of conjurors (105 ff.).

5. The description of *pīṭhas* or pedestals upon which the gods are put (119 ff.).

Chapter IV. The aim of this chapter is to explain the consecration ceremonies or *ḍṛkṣās* which must be performed preparatory to undertaking the specific acts of worship. First comes an account of what the Deçaka must do from the time of his bath to his entering into the place of sacrifice, *yajñamaṇḍapa* (1-27). Then follows the ceremony of alternately reciting the Mantra of the occasion and touching parts of the body (28-66). After this comes the ceremony of *prāṇapratistha*, i. e., the putting of life into the idols and the objects used in the sacrifice (77-92). The chapter ends with a description of foot-rinsing, mouth-washing, and guest-reception ceremonies (93-96).

Chapter V. The subject of this chapter is the sacrificial fire. The production thereof is first taken up. Eighteen *Saniskāras*, i. e., sanctifying ceremonies, are mentioned in the beginning of the chapter and others later (1-6 and 43 ff.). The seven tongues of Agni are mentioned and these again divided into three sevens (20-28).

At the close of the chapter, fire is likened to a living creature with a head and other parts. The various colors of the flames have a specific sacrificial value; the sounds of the flames are also given (150 ff.).

Chapters VI-XXIII. With the close of the fifth chapter the introductory matter comes to an end and the author addresses himself to the description of various Mantras, as to their formation, use, and the results obtainable by them. The method of the Anukramaṇis is followed and the Ṛṣi, the meter, and the divinity are given.

Chapter VI. The main Mantra here is called Varnātatanu, and the deity thereof is Saraswatī. It is made up of fifty letters and twenty-four *lipis*. The word *lipi* seems to refer to the sections of the Mantra; the body is to be touched in twenty-four places and the deity thus placed in it. The eight mothers, i. e., personified energies of the principal deities, are named and described (17 ff.). Five Mantras are manipulated (51-74). *Abhiṣekas*, i. e., bathings of the idols, and *mudrās*, i. e., inter-twinings of the fingers with supposed magical efficacy, are named and their effects given (75-111).

Chapter VII. The first half of this chapter is devoted to Yantras, i. e., amulets upon which Mantras are written. The chief one is called "Bhūtalipi;" a diagram of it is given (1-19).

Long lists of *śaktis* containing 16, 23, and 64 names respectively, are given from verses 20-50.

Ākāśa, *vāyu*, *agni*, *varuṇa*, and *prthivī* Yantras are described (51-61).

From verse 62 the formation of Mantras begins again. The main Mantra is called *Īṅgīrārī* and the deity of it is *Īṅkya*. This is probably a return in reality to the *Sarasvatī* of chapter VI, who is the goddess of speech. In the latter part of the chapter there are frequent references to obtaining skill in speech. The chapter closes with a list of things forbidden to a Mantrin.

Chapter VIII. Formation, use and value of Lakṣmī-Mantras. At verse 37 a new Mantra is mentioned called the *Aṅga-Mantra*. From 141-3 the formation of a Yantra is described. This is followed by another Mantra of 27 letters (144-146). The chapter closes with a list of things forbidden and allowed to the Mantrin (149-167).

Chapter IX. The goddess of the Mantras of this chapter is Bhuvanēśvarī. Various Mantras are formed and gods and goddesses worshipped in the different quarters (1-33). The *śaktis* of Bhuvanēśvarī are then given and this is followed by the formation of three Yantras (34-94). The chapter ends with a statement of the wonderful powers of the Mantra (95-108).

Chapter X. The name of both the Mantra and the goddess of this chapter is Tvaritā, a title of Durgā. Both Mantras and Yantras are formed (1-42). The ten *śaktis* of Kāmadeva are mentioned in verse 69. Here also wonderful powers are attributed to the Mantra.

Chapter XI. The Mantra of this is called the Durgā-Mantra. The value of this Mantra as a means of destroying enemies is frequently referred to. *Abhicāra*, one of the technical words used in connection with the terrible aspects of sorcery, is found in verses 81 and 124.

Chapter XII. The deity of this chapter as well as the main Mantra is named Tripurā-Bhāiravī. This goddess is very highly praised. In one passage she is identified with Viṣṇu, Śiva, Brahman, and their wives (84-85).

Yantras are formed (25 ff.) and *śaktis* named (35-36).

Chapter XIII. The Mantras of Gaṇapati, i. e., Gaṇeṣa, are handled in this chapter. The position in which he sits with his wife is described in 73, 84, 91 (untranslatable). Stars are said to be made by water thrown from Gaṇeṣa's trunk, and he is said to play with the sun and moon as with balls (142 and 145). As to the rest, the "practices" of the chapter are as in other chapters.

Chapter XIV. The Mantras of the heavenly bodies are here given.

1. The Moon-Mantra with Soma as deity (1-28). 2. The Sun-Mantra with Āditya as deity (29-81). 3. The Ajapa-Mantra, i. e., H-a-ū-s-a. This is also the sun (82). 4. Agni-Mantra with Anala as deity (95).

Chapter XV. The great Mantra of Viṣṇu is the subject of this chapter. In verses 13-20 the sun and Viṣṇu are correlated by their names. The Mantras of certain of Viṣṇu's incarnations are given: (1) Rāma Candra (85-109); (2) Varāha (110-139); (3) Pṛthivī (140-154).

Chapter XVI. The Mantras of this chapter are linked up with Nṛsiṃha. These Mantras are remarkably effective in destroying enemies (90).

Chapter XVII. Here we have the Mantras of Puruṣottama, i. e., Jagannāth, i. e., Viṣṇu-Avatar. The chief Mantra is made up of 200 letters. Eight shorter Mantras are named in 44-51 and a Kṛṣṇa-Mantra in 87. A long list of *śaktis* is given and a lot of Yantras are formed (124-155). Various acts of twelve Avatars of Viṣṇu are referred to (a) fish, (b) tortoise, (c) boar, (d) man-lion, (e) Vāmana, i. e., Trivikrama, (f) Paraṣu Rāma, (g) Rāma Candra, (h) Baladeva, (i) Buddha, (j) Kalki, (k) Kṛṣṇa, i. e., Purāṇa Puruṣa, and (l) Viṣṇu himself (156-169).

Chapter XVIII. The main Mantra is named Maheṣa with Īṣa as a deity. In 42-44 there is a Bhāirava-Mantra; in 45 a Durgā-Mantra; in 48-49 a Gaṇeṣa-Mantra, and in 52 a Ġiva-Mantra.

Chapter XIX. The Mantra here is named Mantrarātna and the deity is Ġambhu. In 57 the Cintāmaṇi-Mantra is given; in 114-121 the Kharagrāvan(sic)-Mantra of 170 letters. *Śaktis* are named in 124-125.

Chapter XX. The Aghorā-Mantra stands at the head of this chapter. Further, the large and small Mantras of Kṣetrapāla

are given in 35 and 47. Three kinds of meditation (*dhyāna*) are named, i. e., *sāttvika*, *rājasa* and *tāmasa* (55-56).

Chapter XXI. The Mantras of Gāyatrī are the subject of this chapter. Gāyatrī is said to be the manifestation of the Saccidānanda Brahman (1). Many names of Agni are given (51-52). A list of psychical and other essences and activities is found in 67-71. Nakṣatras and Rāgis are dealt with (78 ff. and 84 ff.). There is a good deal of foe-destruction provided for in the chapter.

Chapter XXII. The main Mantra of this chapter has two names (1) Udināstra(sic)-kṛtyāstra. The second word describes the reverse use of the Mantra, i. e., *pratiloma*. (2) Atidurga. The purpose of this Mantra is defined in the first verse as *patru-vimardana*, i. e., enemy-destruction (1), and the whole chapter proves its power for this purpose. The Lavaṇa-Mantra begins at 59. The various *maṇḍalas*, i. e., mystical circles of the body, are referred to (8-13). Many Mantras are handled in the chapter. A goat, a snake and a cat figure in the ceremonial (56, 73, 77).

Chapter XXIII. The chief Mantra of this chapter is called Trāiyambaka and refers to Mahādeva, i. e., the three-eyed one. Its purpose is just the opposite of the Atidurga-Mantra. Its purpose is expressed by the word "*mṛtyuinjaya*," i. e., death-conquering. The Mantra of Varuṇa is given at 52 ff. In 93-96 we have the Prāṇapraṭiṣṭha-Mantra, and in 117-122 a description of *mudrās*.

Chapter XXIV. This chapter explains the various kinds of Yantras hidden in the Tantras. From 94 on Kuṇḍalī is praised. It is as though the author returned to the subject of the first chapter.

Chapter XXV. The closing chapter deals with Yoga. In verse 1, the author says that the wise (*viçāradāḥ*) call the unity of the Jīva and the Ātman, Yoga. Eight kinds of Yoga are named and described (5 ff.). The chapter contains many references to the body with its veins and parts. Kuṇḍalī comes in for mention several times (34, 35, 62, 65-67). Nāda is said to be produced by closing all apertures of the body (46). The seven *vibhavas*, or secondary forms of Om, are given as *mahātattva*, *ahavikāra*, *śabda*, *sparśa*, *rūpa*, *rasa*, and *gandha* (58).

Various deities are praised, viz.: Parbatī (60), Nārāyaṇa (61-2), Mahādeva (64), and Kuṇḍalī (65 ff.).

Note on bṛhācchandas, AV. iii. 12. 3. By DR. ARTHUR W. RYDER, Harvard University, Cambridge, Mass.

THIS ἄπαξ λεγόμενον has not been satisfactorily explained. Sāyana's gloss reads as follows : *prabhātācchādānā mahadbhiḥ chandobhir vedāir upetā vā*. This cannot be accepted in its entirety, though it seems to me to contain a faint glimmering of the truth. The PW. renders 'mit hohem Dach versehen,' assuming that *-chandās* has here the same meaning as *chadis*, *chadman*. The occidental translators¹ follow this suggestion, though most of them express misgivings.

This rendering, though ingenious, is hardly to be accepted so long as no external evidence can be produced to show that *chandās* ever has the meaning 'roof.' Weber (*IS.* xvii. 236) has already pointed out that the root *chud* nowhere appears in nasalized form. All of Whitney's and Shankar Pandit's MSS. read *-chandāḥ*; and the assumption of a meaning elsewhere unknown is rendered unnecessary by the fact that the ordinary meaning of *chandās* gives a satisfactory sense. The literal meaning of *bṛhācchandas* would seem to be 'whose meter is the *bṛhatī*.'

We have three parallels in AV. vi. 48. Indeed, the expression contained in the first words of our verse is strikingly similar to that of the three verses of that hymn. Compare

AV. iii. 12. 3. *dharaṇy āsi gāle bṛhācchandāḥ* with

AV. vi. 48. 1. *gyeṇā 'si gāyatrācchandāḥ*

2. *ṛbhūr āsi jāgacchandāḥ*

3. *vṛṣā 'si triṣṭūpacchandāḥ*²

The verse iii. 12. 3, with the resolution *dharaṇī āsi*, counts 36 syllables; it is then mechanically a *bṛhatī*, and is so reckoned by the Anukramaṇī. The intrinsic fitness of the connection

¹ Ludwig, *Rigveda*, iii. 463; Zimmer, *AIL.*, p. 150; Weber, *IS.* xvii. 236; Grill, *Hundert Lieder*², p. 59; Griffith, *Hymns of the Atharva-Veda*, i. 97; Bloomfield, *SBE.* xlii. pp. 140, 345; Whitney, p. 105.

² These verses occur in other Vedic texts; see Bloomfield, *Festgruss an Roth*, p. 150; or Whitney, p. 316.

between the building house and the 'great' meter is apparent.¹ Especially significant, in connection with the second half of our verse, is the relation that exists between the *bṛhatī* and domestic cattle : TMB. vii. 4. 4, *paṇavo vāi bṛhatī* ; ÇB. xii. 7. 2,¹⁶ *bārhatāḥ paṇavaḥ* ;² cf. further ÇGS. iii. 3. 1, in the house-building ceremony : *rathantare prati tiṣṭha vāmadānyo gṛayasva bṛhatī stabhāye 'ti sthūṇārājā abhimerṣati* ; and iii. 4. 7, in the sacrifice to Vāstoṣpati : *bṛhato [stotriyena] aparāhne [juhoti]*.

¹ For the symbolism of the *bṛhatī*, see Weber, *IS.* viii. passim (for details, see Index).

² These and other references are given by Weber, l. c. p. 44.

*Kṛṣṇanātha's Commentary on the Bengal Recension of the
Çakuntalā.* By DR. ARTHUR W. RYDER, Harvard Uni-
versity, Cambridge, Mass.

AN excellent and little known commentary on the Bengal recension of Kālidāsa's Abhijñānaçakuntalā is the Praveçikā of Kṛṣṇanātha Nyāyapañcānana (second edition. Calcutta. 1888. 323+14 pp.).¹ To this work my attention was called in the fall of 1900 by Professor Geldner of the University of Berlin. This commentary is recent ; the colophon tells us that the work was finished on the ninth day in the bright half of Āçvina, çaka 1789 (autumn of 1867 A.D.), while the author was living at Pūrvasthalī, a village on the Bhāgīrathī, near Navadvīpa (=Nadiya, at the confluence of the Jellinghy).

The work is prefaced by eight stanzas, the first of which contains an introductory prayer to Çiva, full of plays on words. In these introductory stanzas, the writer's elder brother Çivanāthaçarman receives a handsome tribute for his character and erudition. He was learned in the *dharmaçāstra's*, in grammar, astronomy, and music, and employed his leisure time with *kāvya's*, *alankāra's*, and dramas. This Çivanāthaçarman wrote a commentary on the Ratnāvalī. The father of Kṛṣṇanātha was Keçavacandra, of the family of Arjunamiçra, resident in Videha.

Further information concerning Kṛṣṇanātha's life may be gathered from his work as follows. In commenting on the use of *mahābrāhmaṇa*, as applied by the king to the Vidūṣaka near the end of the second act (Pischel 45. 2), he shows himself familiar with the idiom of Benares by saying (76. 18): "In Benares and elsewhere the term *mahābrāhmaṇa* is applied to Brahmans who steal the best *grāddha* (*agraçrāddhuhāruka-vipreṣu*)." He is apparently the author of the commentary on the Vātaḍūta, mentioned at 117. 12. The expression at 47. 20 also seems to show that he wrote other works.

Apart from the very numerous citations of Amara, Kṛṣṇanātha gives about three hundred and sixty quotations from

¹ A MS. of this work is mentioned in Oppert, *Lists of Sanskrit Manuscripts in Private Libraries of Southern India*, Vol. II, No. 8882.

nearly thirty lexicographers. His most frequently quoted lexicographical authorities are the *Amarakoṣa*, the *Medinikoṣa* (114 quotations), the *Viṣvaprakāṣa* (91 quotations), the *Trikāṇḍageśa*, and the *Ṣabdābdhi*. The less frequently cited authorities are *Hemacandra*, the *Vāijayantī*, the *Ṣabdaratnāvalī*, *Jaṭādhara*, *Dhananjaya*, the *Ṣabdārṇava*, *Bhāguri*, the *Hārāvalī*, the *Ratnaṣaṭkoṣa*, the *Rājanirghaṇṭa*, *Rudra*, *Ṣaṅgavata*, *Halāyudha*, *Dharaṇi*, the *Bhūriprayoga*, *Ajayapāla*, a *Dvirūpakṣa*, *Rabhasapāla*, and *Vyādi*. He furthermore cites (30. 12) "certain commentators" on *Amaṇa* and (140. 21) *Subhūti*.

In addition to numerous quotations from *Pāṇini* and the literature ancillary to his work, there are found 28 quotations from the *Kavikalpadruma* and two from the *Dhātudīpikā*.

To the following legal authorities reference is made : *Manu* (22 times), *Yājñavalkya*, *Dakṣa*, *Devala*, *Viṣṇu*, *Hārīta*, *Nārada*, *Yama*, the *Agastyaśāṁhitā*, *Kātyāyana*, *Gāutama*, *Parāśara*, *Pāṭhīnāsi*, *Bṛhaspati*, the *Ratnamālā* and *Ṣaṅkha-likhita* ; also *Kāmandaki*.

Kṛṣṇanātha's rhetorical authorities are the *Sāhityadarpaṇa*, the *Kāvyaḍarṇa*, the *Kāvyaṣprakāṣa*, the *Candrāloka*, the *Ujjvalanīlamanī* and *Bhojarāja*. *Bharata*'s work on the drama is quoted eight times.

The *Saṅgītādāmodara* is quoted for a musical definition ; for metrical matters, *Piṅgala*, and *Halāyudha*'s comment on *Piṅgala* are quoted.

Astronomy is represented by the *Siddhāntaśiromaṇi*, *Jyotiṣ-tattva*, and *Sūryasiddhānta*.

The medical authorities to which *Kṛṣṇanātha* makes reference are *Suśruta*, the *Bhāvaprakāṣa* and *Caraka*. *Vātsyāyana* is referred to for erotic material.

For augury and chiromancy the *Sāmudraka*, *Vasantarāja* and the *Adbhutaśāgara* are cited.

Finally, a quotation is given from the *Yājñapārṣvaparīṣṭa*. Of several quotations I have not discovered the source.

Various literary works are furthermore laid under contribution for illustrative material. Thus among the *Purāṇas* : the *Viṣṇupurāṇa*, the *Matsya*-, *Garuḍa*-, *Padma*-, *Kūrma*-, *Vāmana*-, *Narasinha*-, *Brahma*-, and *Vāyupurāṇas*. The *Mahābhārata* is quoted eight times (including a reference to the *Bhagavadgītā*), and the *Rāmāyaṇa* once. Other dramas are very sparingly

made use of ; reference is made once to the *Urvaṣī* and once to the *Uttararāmacarita*. Occasional citations are found further from the *Kādambarī*, the *Raghuvaṅga*, the *Kirātārjunīya*, the *Vāsa-vadattā*, and the *Çigupālavadha*.

Kṛṣṇanātha seldom cites other commentators on the *Çakuntalā* and never by name,—though he once (146. 24) makes reference to an opinion expressed by *Mallinātha* in his commentary on the *Kirātārjunīya*. In the seventh of his introductory stanzas, he informs us, however, that he sometimes differs from previous commentators.

A few of *Kṛṣṇanātha's* interpretations may be adduced by way of illustration.

In the fourth act (*Pischel* 79. 6-7) *Priyamvadā* says : “Hurry, Anusūyā, hurry ! The hermits who are going to *Hastināpura* are making their voices heard.” *Kṛṣṇanātha* (136. 20) mentions the opinion of a somebody who declares this to be a false reading, because *Hastināpura* did not at that time exist. Our commentator ingeniously refutes this opinion as follows : *Hastināpura*, he says, was *Duṣmanta's* capital in that version of the *Çakuntalā* story which is found in the first book of the *Mahābhārata*, and this is proved by the following quotation (*MBh.* i. 74. 13=3000) : “‘Good’ said they, and all the mighty men, setting before them *Çakuntalā* with her son, set out for *Gajasāhvaya*,” where they were to meet *Duṣmanta*. But, continues *Kṛṣṇanātha*, *Gajasāhvaya* is *Hastināpura*. This he endeavors to prove by means of two further quotations from the first book of the *Mahābhārata* and the statement of the *Trikāṇḍageṣa* : “*Nāgāhva*, *Hastināpura*, *Gajāhva*, and *Hāstina* are synonyms.” Having thus established the positive side of his argument, namely, that we cannot go behind the authority which we may by a little combination deduce from the *Mahābhārata*, he returns to the objection, formulated in a quotation from the *Viṣṇupurāṇa*. This text declares (*iv.* 19. 10) that “it was *Hastin* who founded *Hastināpura*” and *Hastin* (*iv.* 19. 2 ff.) was the great-great-great-grandson of the adopted son of *Duṣmanta's* son *Bharata*. But this, says *Kṛṣṇanātha*, simply means that he beautified the city, as did *Kuça* upon *Rāma's* decease in the case of the city of *Ayodhyā*. To be sure the *Mahābhārata* says : “Of her (*Suvarṇā*) was born to him (*Suhotra*) *Hastin* who established this *Hastinapura*” (*MBh.* i. 95. 34=3787).

Yet in this case 'established' means no more than 'protected from destruction.' In the same way are to be understood the words of the Raghuvāṇṣa, which declares that Çatrughna was the founder of Mathurā (Ragh. xv. 28), though this city is nevertheless described as the capital of King Suśeṇa, who made one of the gathering at the time of King Aja's wedding (Ragh. vi. 48).

Very ingenious is Kṛṣṇanātha's explanation of the uncommon word *apsarastīrtha*, which occurs three times in the play (stanza 148 = Pischel 112. 2; beginning of Act vi. = Pischel 118. 10; near the end of Act vii. = Pischel 167. 2). The word is ordinarily regarded as the name of a place (PW. s.v.; Apte s.v.); but Kṛṣṇanātha defines as follows. First occurrence: "whose appearance (*tīrtha* = *dargana*) is like that of Apsarases' (*tīrtham... dargane*, Çabdābdhi), i. e. virtually 'appearing like an Apsaras.' Or the meaning is: 'whose place of origin (*yoni*) is the Apsarases,' i. e. 'Apsaras-born' (*tīrtham yonau*, Halāyudha)" (K. 207. 12-14). Second occurrence (K's text has *-sandīṭṭam* for Pischel's *sanīṭṭham*): "the actions (K. supplies *karmajātam*) mentioned (*sandīṭṭam* = *uktam*) by the Apsaras-born (*apsarastīrtha* = *apsaroyoni*: *tīrtham yonau*, Halāyudha)" (K. 217. 12-13). Third occurrence: "*apsarastīrthāvataraṇāt* = *avatīrṇāpsarastīrthāt* (abstract with *kṛt*-suffix used concretely), i. e. 'from one Apsaras-born descended to earth' (*tīrtham yonau*, Halāyudha)" (K. 317. 11-13).

As an instance of Kṛṣṇanātha's skill in detecting *glosses* may be taken his comments on stanza 177 (K. 264. 10-16). In this verse he finds four words which contain an intentional ambiguity in that they refer both to the royal house (or the king) and to the Sarasvatī:

- <i>saṁtati</i>	1. family	2. stream
<i>pāuravam</i>	1. pertaining to Pūru	2. exceedingly (<i>bhūyiṣṭham</i>)
<i>prajāvandhye</i>	1. without offspring	2. deserted
<i>anārye</i>	1. ignoble	2. untraversable (<i>agamya</i>)

Further examples are to be found at 25. 7-17 (explaining the speech of Çakuntalā, Pischel 13. 1-4) and at 35. 24-36. 12 (explaining the speech of the king, Pischel 19. 12-13).

A matter apt to escape the notice of the occidental reader may be added. In commenting on stanza 202, Kṛṣṇanātha calls

attention (293. 9) to the color of the lotus, which is here compared with Sarvadamana's hand. He then adds (293. 11) a quotation from the Sāmudraka: "Pink palms are a sign of royalty (*yasya pāṇītalāu raktāu tasya rājyam vinirliṣet*)."¹

Quotations might be multiplied. Yet these citations will perhaps suffice to show the erudition and judgment of Kṛṣṇanātha. His commentary is a contribution to the better understanding of the play.

¹ This point is often made in the Mahābhārata. Compare i. 122. 29, where, when the king makes the *añjali*, his pink fingers (*raktāṅgulī*), look like a lotus-cup.—ED.

Jupiter Dolichenus.—By REV. CHARLES S. SANDERS, Aintab, Turkey.

FOR a thorough understanding of Jupiter Dolichenus and his worship, two things would be necessary. The first of these is a satisfactory knowledge of the old Baal cults or worship of Syria, for without doubt the cult of Jupiter Dolichenus in its original form was simply the worship of the local Baal. How much is really known concerning the old Baal worship in North Syria is a matter that admits of question. One valuable source of information is the coins of the region, of which more later.

Again, on the Roman side, the cults of the purely Roman worship of Jupiter—Jupiter Stator, Jupiter Depulsor, etc.—would need to be better understood. The relation of these to the national worship has not yet been adequately investigated; see, for example, the article “Jupiter” in the *Encyclopædia Britannica* (vol. xiii., p. 780). If this relation could be made clear to us, we should very likely see how easy it was for the Romans to adopt the Dolichenus cult, its worshippers among the Romans conceiving of it as merely a new manifestation of their national worship.

Dolichenus seems to have come into the Roman world as one of the Oriental gods, so popular in Rome in the second century. The Antonines being very friendly toward the Oriental cults (witness Antoninus Pius even building a temple to Jupiter Heliopolitanus), they came in with a rush. Mithra, the most popular of all, has little bearing on our subject, though Dolichenus is elucidated passim in Dr. Cumont's great work on Mithra.¹ The Egyptian cults have also no interest for us in this connection. Two cults, however, seem to have much in common with the worship of Jupiter Dolichenus, namely, that of Atargatis (Derketo), the “Dea Syria” of Hierapolis, well known through Lucian's *De Dea Syria*, and that of Jupiter Heliopolitanus. There are other cults, as *Jupiter Damascenus*, *Jupiter Olbius*,

¹ *Textes et Monuments figurés relatifs aux Mystères de Mithra*, Brussels, 1899.

etc., but scarcely anything is known of them. On the ground of contiguity, we should expect the inscriptions of the god Aziz of Edessa, found in Dacia, to throw some light on the subject; but that which is gained from them points more probably to affinities with the Mithra cult. See Cumont's *Textes et Monuments*, i. 250, note 2; 260, note 2.

Three inscriptions of Dacia and the unequivocal testimony of Stephanus of Byzantium locate the original seat of Dolichenus' worship at Doliche (Δολίχη) in Commagene. While there are many places bearing this name, the above reference ("aeternus Commagenorum deus") settles the question. Stephanus, in speaking of Doliche in Commagene, mentions the worship there of Jupiter Dolichenus. The place is rather near the southern boundary of Commagene. Its coins begin only with Marcus and Verus. Ptolemaeus is the first geographer to mention it. Yet the Macedonian name makes us at least wonder whether it was not one of the places where Alexander the Great's veterans settled. It is very near the junction of four Roman roads; one leading to Samosata, one to Edessa via Zeugma, one to Germanicia (the modern Marash), and one to Cyrrhus and Antioch. It is not far (some thirty-six miles) from Cyrrhus, a center of Roman soldiers, a fact which probably accounts for the transformation of the local Astarte into "Minerva Cyrrhastica." This proximity of a great Roman fort may also account for the distinctively military character of Jupiter Dolichenus in his European transformation.

In church history Doliche is noteworthy as being the place where Eusebius of Samosata was murdered just after the termination of the Arian controversy. At present it is merely a prosperous Turkish village. A mound near by yields pillars, capitals, etc., to every digger, and probably this hill was the site of Dolichenus' original temple. The place is notable for the large number of sepulchres found there. The only (?) inscription, however, thus far discovered among them is a bit of Syriac. The present village is notable for an unusually handsome mosque, erected probably before the Turkish period. There is a much higher hill about two miles away, which is known as Dulūk Bābā. It contains a Moslem ziyāret, and probably marks an ancient holy place. It is possible that the original seat of the Dolichenus worship was here, but more probably it was the hill mentioned above, very near the present Doliche.

According to Hettner (*De Jove Dolicheno*, Bonn, 1877), we have a bit of local idiom in the very name "Dolichenus." Stephanus says that the god was called "Zeus Dolichaïos," but that "the local usage is Dolichenus." *Dolichaïos* is not once used in the inscriptions, the form being *Dolichenus* or a misspelling of the same, or else what seems to be an echo of one of the Syriac forms of the name, which is variously written *Doluk*, *Dulik*, etc.

When we come to the conventional representations of the god, two distinct questions arise: (1) How was he represented at home? (2) What was his appearance in his European transformation?

(1) The "Dea Syria" is abundantly pictured on coins; Jupiter Heliopolitanus appears on coins and also on bits of statuary, though the latter are generally broken, as in the case of the specimens in the museum of the Syrian Protestant College in Beyrout. Coins of Dolichenus are rare. The writer has been allowed to see some in the possession of Mr. E. Michel of Alexandretta. We seem to have here the original Syrian form. The god is standing on an animal which is rather small in proportion, and both are facing the right. The military accoutrements so prominent in the European transformation are wanting. On one coin the god—still standing on an animal—is represented as under a canopy or roof on pillars. The question at once arises, whether the tetrastyle of *CIL.*, vi. 414, is not identical with such canopies as these, which are often met with on coins of North Syria, certain coins of Zeugma, for example, and others probably belonging to deities whose names have passed into oblivion.

Little bronzes with a human being standing on an animal more or less fantastic are quite common. Probably they are also representations of Syrian gods. They are very common around Zeitūn and Geok-sun, in Western Commagene. This branch of the subject is as yet practically uninvestigated.

(2) In his European transformation there seem to be only two features of Dolichenus, on the monuments where he is pictured, which are Oriental; namely, the uplifted position of the arms, and the fact that the god stands on an ox which faces the right. He has the pileus on his head, the lorica on his body, is often provided with greaves, and wears the soccus. Sometimes

there is the military cloak. In the right hand is the bipennis and a thunder-bolt in the left. Often a winged victory is about to crown him, and an eagle is sometimes near. In a very few cases the Sun and Moon figure, as in the representation of Mithra. Sometimes the god is represented unmounted, and certainly once just like the Roman Jupiter. This taking on of pure Roman forms happens also sometimes in the Egyptian cults.

It is a striking feature of the old Syrian gods that they have their partners, though the partners are subordinated. Thus, the Dea Syria has her male complement (see Hettner), and similarly Jupiter Dolichenus has his female associate. She is on an ibex, a wild goat or some such animal, which faces the left, and thus Dolichenus and his complement face each other on monuments where they both exist. Her name in the inscriptions is Juno; but as Jupiter Dolichenus is the local Baal of Southern Commagene, so, probably, in the original worship, his complement Juno bore one of the several names under which Astarte appears.

To one interested in Commagene, there arises at once the question why this distinctively Commagenean god had his original seat in so obscure a place. The discoveries of Humann and Puchstein,¹ which show so strong a development of the Mithra cult in Nimrūd-Dāgh, suggest one answer. As the inscription there shows that the reigning dynasty at Samosata were followers of Mithra,² we should hardly expect, very near by, a god who could be called "aeternus Commagenorum deus." Again, while some of the old sites have kept their identity through the centuries, one has only to travel through Commagene, Cyrrhastica, and Osrhoene, now, to find many old temple sites marked as once important centers of worship by the number and size of the weather-beaten pillars which are still standing, though no record of their glory remains. Doliche may in the pre-Roman time have had an importance in the religious world of Southern Commagene of which we now know very little.

Hettner does not enter at all into the manner in which Dolichenus was worshipped. Of this very little is known. That there used to be *dolichena*, just as there were *mithrea* in the cult of Mithra, is fully ascertained, such having been actually

¹ *Reisen in Kleinasien und Nord-Syrien*, Berlin, 1890.

² See Cumont, *Textes et Monuments*, ii. 187 f.

found.¹ The coins would seem to show that the tetrastyle was a feature of the worship of the old Syrian gods. Such a tetrastyle with Jupiter Dolichenus under the open roof is figured on one of the coins mentioned above. Would it be too bold a conjecture to assert that such a tetrastyle did not represent the original seat of worship, but that it was a feature of the country then, as the ziyāret is now, and that very likely many modern ziyārets represent such ancient high places?

Sacerdos is used so often as to show plainly that the priestly idea and function were very fully developed. *Candidatus* is a word occurring in a way that makes us wonder whether it does not mark a special class, being employed, that is, in something like its primary meaning (white-clothed), and not in the usual, secondary sense of the word. See especially the Roman inscription *CIL.* vi. 406 (also p. 834, note to 406), *pro salute sacerdotium et kandidatorum et colitorum*. In the same inscription, *lecticari dei. Triclinium*, *CIL.* iii. 4789(b), and *cenatorium*, quoted by Cumont,² rather go to show something like a sacrament, or at least a sacrificial meal. There was such in the cult of Mithra; and in the upper part of Commagene, among some of the Kuzul-bash Koords, there is probably something of the same thing to-day. Though kept secret as much as possible, it is known that such rites exist.

Aside from the hints contained in these and like words, we have no knowledge of the details of the worship, beyond what may be inferred from the little we know about the cults of Mithra and Atargatis. Vows were evidently quite a feature of the worship—hence many of the inscriptions. *Ex jussu ipsius, ex jussu numinis* would go to show a degree of personal relation, or at least the possibility of receiving impressions from the god regarding his will.

As no inscriptions have been found in the East (so far as I am aware) relating to Dolichenus, we are obliged to speak of this god hereafter with exclusive reference to his Western transformation. These Eastern cults do not seem to have taken root at all in Greece; it is the Roman world which follows them. Hettner gives the following as the distribution of the three cults, in the Western world:

¹ See Cumont, *Textes et Monuments*, i. 333.

² *Textes et Monuments*, i. 320, note 8.

	Dacia.	Moesia.	Pannonia.	Noricum.	Raetia.	Germania.	Gallia.	Britannia.	Africa.	Dalmatia.	Italy (not Rome).	Rome.	Total.
Dea Syria.....	2(?)		1					3			1	3(?)	10
J. Heliopolitanus....	2	1(?)	4(?)			1	1	2(?)	2		4	4	21
J. Dolichenus	11		13	3	1	14	1	8	3	1	9	20	84
Total by countries...	15	1	18	3	1	15	2	13	5	1	14	27	115

It must be borne in mind that the above list includes not only inscriptions but *tituli* as well; often, for example, only a statue or part of a bas-relief, which, however, has features which make it without doubt the *titulus* of such and such a god.

In two Dacian inscriptions Heliopolitanus and Dolichenus are joined together. This is good evidence of the close resemblance which was recognized as existing between the two cults. As in North Syria the two deities were different local manifestations of the same god, essentially, so in Europe their votaries looked upon them as holding much the same relation. Leave the sex out of account, and the same would probably be true of Dea Syria also.

It remains to answer briefly three questions pertaining to the Dolichenus cult in Europe: (1) How did it get there? (2) Where did it take root, and to what degree? (3) The dates *a quo* and *ad quem*.

(1) *How did it get to Europe?* The first answer that comes to mind is, that of course the legions in the East brought it back with them (compare Tacitus, the legion from the East "saluting the rising sun"), they had become votaries of Mithra. But this is probably a wrong inference. We must especially bear in mind that, so far as we can tell from comparison of the representations on coins and on bas-reliefs found in Europe, it was not a purely Oriental cult, but a *transformed* Oriental cult, that was so popular in the Roman empire.

One fact which especially attracts our attention is the frequent recurrence of the name *Marinus*, and the way in which it is connected with *sacerdos*, in the inscriptions. It seems proba-

ble that "Marinus" was a name specially connected with the cult; perhaps it was the name of a priestly family, or rank.¹

In the early centuries there seems to have been a very large number of traders from the East throughout the Roman empire. The inscriptions prove their existence as far as Lyons, at least, and probably they travelled over the known world as diligently as do to-day the Armenians, and still more, the Syrians of the Beyrout region. We must also remember the vast number of slaves from the East, so plentiful especially in Rome. As Christianity often worked up from slaves to their masters, why may not the worship of Dolichenus have done the same?

Outside of Italy, these cults seem to have taken firmest root in Dacia. When this province was drained of men after Trajan's subjugation of the country, Eutropius tells us that the emperor ordered that large drafts be made on all parts of the empire to re-people the country. The inscriptions of Aziz of Edessa in Dacia show us that a large draft was taken from Osrhoene, just across the Euphrates from Commagene. Why should not the presence of the Dolichenus cult in Dacia lead us to believe that such a transplanting took place, at that time, from Commagene also? That even associations and guilds of Syrians existed there, and in numbers too, is shown by the inscriptions.

Juvenal's "Jam pridem Syrus in Tiberim defluxit Orontes" shows us what an influence the oriental part of the Roman population had at that time, if not on the government, at least on the life of the people. What with merchants, soothsayers, dancing-girls, soldiers, and slaves, the different lines of influence from the East were continually tightening their grasp on the West.

The objection may be made that, if the influences of these cults had been so powerful, later Roman literature would reflect them more. The Mithra cult may be quoted in answer. The enormous number of its monuments shows how it flourished,—even some of the emperors patronized it,—and yet what can we learn of it from Latin authors? It is very evident, at all events, that the priests of Dolichenus were everywhere zealous in propagating their religion, and that their efforts were successful. Hettner thinks that the influence of the soldiery in spread-

¹ See, however, Ed. Meyer, in Roscher's *Lexicon der Mythologie*, s. v. "Dolichenus;" who suggests that this is a Latinized form of the Syriac *marna* "(our) lord."

ing the cult has been overestimated. We know, however, that the XVI. legion "Flavia firma" served in Commagene. Officers were changed from legion to legion, and thus may have influenced other legions when serving later in Europe. There were, moreover, at least six cohorts from Commagene, and that these cohorts were very busy in propagating their ancestral worship is extremely probable.

(2) *Where did the worship take root, and to what degree?* So far as extant inscriptions give us an answer, the cult of Dolichenus seems to have taken root quite deeply in Dacia, Pannonia, Germania, Britannia, Italy and Rome. In Dacia, two or three cohorts from Commagene served a long time. In Pannonia, priests and merchants seem to have been very active, and we find one inscription, "Syrus ex regione Dolica." As to England, we know (i. e., can certainly infer) that Dea Syria, Helio-politanus and Dolichenus were all taken there by Cohort I. of the "Hammii." This name has with great probability been referred to the Syrian city Ḥamā (Hamath). If this explanation is correct, the fact shows how true it is that these worshippers regarded a number of distinct Syrian cults as essentially the same; for Ḥamā is far beyond the territory of Dolichenus, and there is no evidence tending to show that the Dolichenus worship had in its own land anything like the wide-reaching influence of Dea Syria, as attested by Lucian of Samosata.

As to the degree to which these cults affected the territories involved, we can only guess. The influence must, however, have been very considerable in Dacia and Pannonia, and in England in the small territory north of Hadrian's wall, where all the English inscriptions but one are found.

(3) *The date.* The earliest inscription known, which is dated, is one in England; namely the inscription *CIL.* vii. 506, belonging to the time of Antoninus Pius, 139-161 A. D. The temple of Dolichenus on the Aventine was probably built (*aedificatus*) or recognized as a temple in the time of the Antonines. That such a temple was founded (*conditus*) before the time of Claudius is very probable. Hettner, using arguments put forth by Jordan¹ in treating of the temple of the Dea Syria at Rome, concludes that the worship of Dolichenus must have become

¹ In *Hermes*, 1872, p. 320.

naturalized, so as no longer to appear foreign to the Romans, at the time when Claudius brought the Aventine within the limits of the *pomerium*, as foreign gods were forbidden within the *pomerium*.

We cannot suppose that the cult of Dolichenus went from Commagene to England at a bound. It is found there, however, in the time of Antoninus Pius. In this connection *CIL*. vii. 316 is interesting, "[*templum*] *vetustate co(n)lapsum*." The inscription is not earlier than the close of the second century, but how much older was the temple? It seems impossible to account for the facts known except on the supposition that in the first century, and possibly even earlier, the cult first began to work westward; compare the earlier appearance of Dea Syria in Italy. Later the cult seems to have become merged in that of Mithra. *CIL*. vi. 412 and 413 show the beginning of this process, in the dedication to the Sun and Dolichenus together. Yet the very late date of some of the inscriptions makes it probable that it continued to maintain its separate existence in some localities, at least, until the time when Christianity relegated so many of these cults to oblivion.

Bibliography of Kālidāsa's Mālavikāgnimitra and Vikramorvaṣī.—By MONTGOMERY SCHUYLER, JR., United States Embassy, St. Petersburg, Russia.

IN the last volume of the *Journal of the American Oriental Society* (xxii, 1901, pp. 237-248) I published a bibliography of "The Editions and Translations of *Çakuntalā*." The present paper is designed to complete the bibliography of the dramatic works of Kālidāsa by collecting a list of the editions and translations of the other two plays of the Hindu Shakespeare. Of these, the *Vikramorvaṣī* is universally acknowledged to be the composition of Kālidāsa; but about the authorship of the *Mālavikāgnimitra* there has been considerable discussion. The chief grounds upon which are based the arguments against the authorship of Kālidāsa are the great inferiority of this drama in poetic merit, and its clumsiness in construction, when compared with the *Çakuntalā* and the *Vikramorvaṣī*. It is not possible or desirable to go into the discussion here, but it will be sufficient to say that the consensus of opinion at the present time is in favor of admitting the *Mālavikāgnimitra* as the composition of Kālidāsa, and accordingly it will be included in the present study.¹

MĀLAVIKĀGNIMITRA.

TRANSLATIONS.

A. English.

1. *Mālavikāgnimitra*, translated into English prose by C. H. Tawney.

First edition. Calcutta, 1875, 8vo, pp. x+83.

Second edition. Calcutta, 1891, 12mo, pp. 121.

¹ Here, as in the "*Editions and Translations of Çakuntalā*," the translations are arranged according to the language in which they are written, and under each heading chronological sequence is followed. In transcribing titles I have usually retained the spelling of the original. Works of general criticism of Kālidāsa which deal only incidentally with the plays are not noted here. Nor have manuscripts been included, although I hope to catalogue them in my forthcoming *Bibliography of the Sanskrit Drama* (Columbia University Press).

2. *Mālavikāgnimitra*, a Sanskrit drama, translated into English prose by G. R. Nandargikar.
Poona, 1879, 8vo, pp. 53.
[See also under Text Editions, Nos. 12, 13, 14.]

B. French.

1. *Malavika et Agnimitra*. Traduit pour la première fois en français par P. E. Foucaux.
Paris, 1877, 16mo, pp. xi+118 (Bibl. Orient. Elzévirienne, no. xiv).
2. *Mālavikāgnimitra*. *Agnimitra et Mālavikā*, comédie en cinq actes et un prologue, mêlée de prose et de vers, traduite de sanscrit et du prācrit par Victor Henry.
Paris, 1889, 8vo, pp. xii+110.
(Extr. des Mém. de la Soc. des Sciences de Lille.)

C. German.

1. *Mālavikā und Agnimitra*, ein Drama des Kālidāsa in fünf Akten, zum ersten Male übersetzt von Albrecht Weber.
Berlin, 1856, 16mo, pp. xlviii+107.
2. *Malavika und Agnimitra*, ein indisches Schauspiel, metrisch übersetzt von Ludwig Fritze.
Leipzig, 1881, 32mo, pp. 74.

D. Dutch.

- Danseres en Koning. Malavika en Agnimitra. Tooneelstuk uit het Sanskret vertaald door J. van der Vliet.*
Haarlem, 1882, 8vo, pp. 132.

E. Swedish.

- Mālavikā. Ett indiskt skådespel. Från Sanskrit öfversatt af H. Edgren.*
Malmö, 1877, 8vo.

F. Danish.

- Kongen og Danserinden. Lystspil i fem Akter. Oversat af E. Brandes. Med Tegninger.*
Kjöbenhavn, 1874, 8vo.

G. Italian.

1. Malavica ed Agnimitro. Dramma in cinque Atti. Tradotto da Antonio Marazzi.
Milano, 1871 (in his Teatro Scelto Indiano, vol. I.).
2. Mālavikāgnimitra. Dramma indiano tradotto in italiano da Francesco Cimmino.
Napoli, 1897, 12mo, pp. xi+126.

H. Bohemian.

- Mālavikā a Agnimitra. Přeložil Zubatý.
Prag, 1893, 8vo, pp. 102 (Sbornik světové poesie 16).

I. Bengali.

- Mālavikāgnimitra, translated into Bengali by Sourindro Mohun Tagore.
Calcutta, 1877, 18mo.

J. Marathi.

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Bombay, 1889, 8vo, pp. 204.
2. Mālavikāgnimitra. Translated into Marathi by Rāo Sāheb Nārāyan Gopāl Rāje.
Bombay, 1895, 8vo, pp. 156.
3. Sangīta Mālavikāgnimitra Nātak, or the drama of Mālavika and Agnimitra in musical verse. Translated into Marathi by Bālkrṣṇa Gangādhara Varde.
Bombay, 1895, 8vo, pp. 136.

K. Hindi.

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Cawnpore, 1899, 8vo, pp. 70.

L. Gujarati.

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2. Mālavikāgnimitra.
Bombay, 1868, 8vo, pp. 4+89, lithographed.
3. Mālavikāgnimitra. A Sanskrit Play. With the commentary of Kāṭayavema. Edited with notes by Shankar Pāṇḍurang Pandit. (In Bombay Sanskrit Series, No. vi.)
First edition. Bombay, 1869, 8vo, pp. xxxix+164.
Second edition. Bombay, 1889, 8vo, pp. xxxv+230.
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First edition. Calcutta, 1870, 8vo, pp. 165.
Second edition. Calcutta, 1887, 8vo, pp. 148.
5. Mālavikāgnimitra, das ist Malavika und Agnimitra, ein Drama Kālidāsa's in fünf Akten. Mit kritischen und erklärenden Anmerkungen herausgegeben von F. Bollensen.
Leipzig, 1879, 8vo.
6. Mālavikāgnimitra with the commentary named Kumāragirirājya of Kāṭayavema.
Vizagapatam, 1884, 8vo, pp. 133.
7. Mālavikāgnimitra, edited with an original commentary by Mrityuñjaya Niṣṣanka.
Madras, 1885, 8vo, pp. 262.
8. Mālavikāgnimitra.
Little Kanjīveram, 1886, 8vo, pp. 64. (In Grantha characters.)
9. Mālavikāgnimitra. Sanskrit text with full notes in English by M. C. Sadagopachariar.
Bombay, 1889, 8vo.
10. Mālavikāgnimitra, edited with the commentary of Kāṭayavema, and with explanatory English notes by K. P. Parab.
Bombay, 1890, 8vo, pp. 153.
11. Mālavikāgnimitra. Edited with the commentary of Kāṭayavema.
Bombay, 1891, 12mo, pp. 112.

12. *Mālavikāgnimitra*. With the commentary of Kāṭayavema.
Edited with explanatory English notes.
Bombay, 1891, 8vo, pp. 158.
13. *Mālavikāgnimitra*, with the commentary of Kāṭayavema
and several others embodied therein, edited with critical
notes and translation by S'. S'eshādri Ayyar.
Poona, 1896, 8vo, pp. 303.
14. *Mālavikāgnimitra*, edited with a close English translation
by Sadāshiv Bhimrāv Bhāgvat.
Poona, 1897, 8vo, pp. 126.
15. *Mālavikāgnimitra*. Edited with a commentary, notes and
translation by M. C. S'atakopācāri.
Kumbakonam, 1900, pp. 152.

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monthly magazine of Sanskrit literature, Bombay,
1884, 12mo, vol. ii, pt. 4, pp. 48.
2. Bollensen, Friedrich. Beiträge zur Erklärung der *Mālavikā*.
In ZDMG. xiii, pp. 480-490.
3. Cappeller, C. C. Observationes ad Kalidasae *Malavikag-*
nimitram.
4. Haag, Friedrich. Zur Texteskritik und Erklärung von Kāli-
dāsa's *Mālavikāgnimitra*. Erster Teil. Auszug aus dem
Programm der Kantonsschule pro 1871-72.
Frauenfeld, 1872, 4to.
5. Vliet, J. van der. *Mālavikā-Maṇjulikā*.
(In Bijdrage, VI. v(=xlix), p. 169 seq.) On resem-
blances between the *Mālavikā* and the *Kathāsarit-*
sāgara.
6. Weber, Albrecht. Zur Erklärung der *Mālavikā*.
(In ZDMG. xiv, p. 261.)
7. Analysis of *Mālavikāgnimitra* in H. H. Wilson's Hindu
Theater, vol. ii, Appendix.

VIKRAMORVAÇI.

TRANSLATIONS.

A. English.

1. Vikrama and Urvasi, a drama translated from the original Sanskrit, by H. H. Wilson.
(In his Hindu Theater, vol. i.)
2. Vikramorvasi. Translated into English prose by E. B. Cowell.
Hertford, 1851, 8vo.
3. Vikramorvaçî. Translated into English lyrical verse by Brajendranath De. Canto I.
(In Calcutta Review, Oct. 1884, pp. 440-442.)
[See also below under Text Editions Nos. 16, 18, 19.]

B. French.

1. Vikramorvaçî Ourvaci donnée pour prix de l'héroïsme.
Drame traduit du Sanscrit par P. E. Foucaux.
Paris, 1861, 8vo, pp. 96.
Paris, 1879, 16mo, pp. 137. (Bibl. Orientale Elzévirienne, no. xxvi.)

C. German.

1. Urvasi, der Preis der Tapferkeit. Ein indisches Schauspiel.
Aus dem Sanskrit und Prakrit übersetzt von K. G. A. Hoefer.
Berlin, 1837, 8vo, pp. viii+100.
2. Urvasi und der Held. Indisches Melodram von Kalidasa, dem Dichter der Sakuntala. Aus dem Sanskrit und Prakrit metrisch übersetzt von B. Hirzel.
Frauenfeld, 1838, 16mo, pp. xxx+164.
3. Vikramorvaçî, das ist Urvasi, der Preis der Tapferkeit, ein Drama Kalidasa's, in fünf Akten. Herausgegeben, übersetzt und erläutert von F. Bollensen.
St. Petersburg (Leipzig), 1846, 8vo, 2 pts., pp. xvii+608+88.
4. Urvasi. Deutsch metrisch bearbeitet von E. Lobedan. Leipzig, 1861, 16mo, pp. xiv+115.
5. Urvasi, ein indisches Schauspiel von Kalidasa, metrisch übersetzt von Ludwig Fritze.
Leipzig [1880], 32mo, pp. 80.

D. Swedish.

1. Vikramorvaṇī. Öfversat och förklart af C. J. Bergstedt.
Stockholm, 1846, 8vo.
2. Vikramorvaṇī. Öfversat af A. J. Callin.
Helsingborg, 1866, 8vo.

E. Italian.

Vikramorvasi, dramma tradotto di Francesco Cimmino.
Torino, 1890, 8vo, pp. 79.

F. Spanish.

Vikramorvasi, drama del poeta indio Kalidasa Version
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Madrid, 1874, 8vo, pp. 136. (In Biblioteca San-
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G. Bohemian.

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Prag, 1890, 4°, pp. 10. (Programm čech. Real-
gymnase.)

H. Bengali.

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Calcutta, 1857, 8vo.

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Bombay, 1868, 8vo.
2. Vikramorvasi. A Sanskrit drama in 5 acts translated into
Gujarati prose and verse with critical, explanatory and
mythological notes, and a complete life of the poet by
Kilabhāi Ghanashyāmi Bhatt.
Bombay, 1898, 8vo, pp. 258.

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of the Pracrit passages.
Calcutta, 1830, 8vo, pp. 122.
2. Urvasia Fabula Calidasi. Textum sanscritum edidit, inter-
pretationem latinam et notas illustrantes adjecit Robertus
Lenz.
Berolini, 1833, 4to, pp. xxv+238. (Same text as
No. 1.)

3. Vikramorvaṇī. A Drama by Kalidasa. Edited by Monier Williams.
Hertford, 1849, 8vo. (Prākṛit passages in Sanskrit only.)
4. Vikramorvaṇī . . . prākṛitabhāṣāyāḥ chāyayā sahitam.
Bombay, 1859, 8vo, pp. 119. (Lithographed.)
5. Vikramorvaṇī. Edited by Ramayasarma Tarkaratna.
Calcutta, 1868, 8vo.
6. Vikramorvaṇī nāma troṭakam. Edited with notes by Rāmā-maya Śarman.
Calcutta, 1869, 8vo, pp. ii+155.
7. Vikramorvaṇī troṭakam.
Calcutta, 1870, 12mo, pp. 67. (Prākṛit passages in Sanskrit only.)
8. Vikramorvashi, a drama in five acts, by Kalidasa. Edited with the commentary of Tārānātha Śarman by Pandit Jibananda Vidyasagara.
Calcutta, 1873, 8vo, pp. 184.
9. Kālidāsa's Vikramorvaṇīyam, herausgegeben nach drāvidischen Handschriften von R. Pischel.
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First edition. Bombay, 1879, 8vo, pp. xii+162.
Second edition. Bombay, 8vo, pp. 310.
11. Vikramorvaṇī nāṭaka.
Little Conjeevaram, 1883, 8vo, pp. 60. (In Grantha characters.)
12. Vikramorvaṇī, with interpretation of the Prakrit passages.
Vizagapatam, 1883, 16mo, pp. 118.
13. Vikramorvaṇī with a commentary. Edited by Ṣri Paravastu Ṣrinivāsa Bhaṭṭa Nadha Charya.
Vizagapatam, 1883, 8vo, pp. 180.
14. Vikramorvaṇī nāṭakam with commentary.
Madras, 1884, 8vo, pp. 24.
15. Vikramorvaṇīya with the commentary (Prakāṣikā) of Rāganātha. Edited by K. P. Parab and M. R. Telang.
Bombay, 1888, 8vo, pp. 148.

16. Vikramorvaṣīyam. The Student's Practical Edition with Sanskrit Text, English Translation and Notes by G. B. Vaidya.
Bombay, 1894, 2 Pts., 8vo, pp. xii+96+216.
17. Drama of Vikramorvaṣī. Edited with an elucidary commentary in Sanskrit by Moreshvar Rāmchandra Kāle.
Bombay, 1895, 8vo, pp. 173.
18. Vikramorvaṣīya with the commentary Arthaprakāṣikā. Edited with an English translation, critical and explanatory notes, and various readings by M. R. Kāle.
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19. Vikramorvaṣīyam. With Sanskrit Text, English Translations, Copious Notes and an elaborate introduction, by Keshar Balkrishna Paranjpe.
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[See also above under Translations, C. 3.]

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Paris (Meaux), 1859-60, 2 vols., 8vo.
2. Teatro Scelto Indiano tradotto dal Sanscrito da Antonio Marazzi. Vol. Primo. Teatro di Calidasa.
Milano, 1871, 12mo, pp. 429.
3. Mahākavi Kālidāser Granthāvalī. Edited by Nava Kumār Basu.
Calcutta, 1892.
4. Mahākavi Kālidāser Granthāvalī. Edited by Upendra Nāth Mukherji.
Second edition. Calcutta, 1896, 8vo, pp. 1356.

A Manuscript of Gul ū Naurūz, a Seventeenth Century Persian Romance, in the Library of Columbia University.—By DR. ABRAHAM YOHANNAN, Columbia University, New York City.

AMONG the manuscripts in the library of Columbia University there is a small octavo volume of a seventeenth century Persian romantic poem, to which it is appropriate to call further attention. It is a manuscript presented to the library by Mr. S. P. Avery. The book is entitled *Gul ū Naurūz* (گل و نوروز), or Rose and New Year's Day; and it contains an attractive specimen of the romantic epopée of Persia, which may be of some interest to students of mediæval literature as well as to Orientalists, because of the parallels which it affords to compositions in the West.

From the introductory lines of the romance we learn that the writer of this poetical work was a Turk, and in the colophon we are told his name, Mīrzā Daulat Rizā Bēg Ḥanīkī (میرزا دولت رضا بیگ حنیکی), and that he wrote the poem in the years A.H. 1033–1036 (A.D. 1621–1624). According to his own statement, he wrote it originally in Turkish, and afterward translated it into Persian. It is a result of this process, evidently, that a few Turkish words are to be found in the book. Thus, the words *şai* (شی), 'thing,' and '*aurat* (عورت), 'woman, wife,' which are Arabic-Turkish, have occasionally been employed, instead of the regular Persian terms, which are *ĕz* (چیز) for the former and *zan* (زن) for the latter.

A similar work which our writer may have taken as a model is the *Naurūz ū Gul*, composed by Khwājū Kirmānī (خواجو کرمانی) in A.H. 742 (A.D. 1341–1342); cf. Ethé, in *Grundriss der Iranischen Philologie*, ii. 249. According to Erdman, *ZDMG.*, ii. 212, the manuscript of this poem in the University Library of Kasan was copied by Ḥājī Šinānī (حاجی سنانی) at Samar-kand in A.H. 1038 (A.D. 1629), and was dedicated to the vizir

Tājuddīn Aḥmad 'Irāqī (تاج الدین احمد عراقی), and comprised 5230 half-verses or 2615 full verses. Another copy of Khwājū Kirmānī's work is found in the British Museum; it was probably made by one Tūrānshāh (توران شاه), according to Rieu, *Catalogue of Persian Manuscripts*, ii. 867 and 622. The title of the book is there given as *Gul ū Naurūz*, precisely as in our manuscript, whereas Hājī Sinānī, according to Erdman, calls it *Naurūz ū Gul*, the order of the names being reversed. There is still another book of the same nature by Maulānā Jalāl uddīn Aḥmad of Shīrāz (جلال الدین احمد شیرازی), commonly called Jalāl Ṭabīb (جلال طبیب), composed in A.H. 734 (A.D. 1334), and dedicated to the Prince Ġiyāth uddīn Kaikhusrau; cf. Rieu, *Catalogue of Persian MSS.*, ii. 867; Ethé, *loc. cit. supra*; Daulatshāh (ed. Browne, p. 298); Pizzi, *Storia della Poesia Persiana*, ii. 210.

With the exception of the title, *Gul ū Naurūz*, almost all the names of the persons and places connected with this present romance are different from those mentioned in the manuscript of Khwājū Kirmānī, as briefly described by Erdman and Ethé. Khwājū Kirmānī, for example, says that Naurūz was the son of Shāh Fīrūz (شاه فیروز), of Khorāsān, and Gul was the daughter of the Byzantine emperor (قیسر روم). The present manuscript, on the other hand, says that Naurūz was the son of Shāh Ferukh (شاه فرخ) of Nau Shād (نوشاد), and that the father of Gul was Mushkīn Shāh (مشکین شاه) of Ferkhār (فرخار). A great number of similar divergences in names and incidents might be noted, as far as can be gathered from so scanty a description.

With reference to the *Gul ū Naurūz* of Jalāl Ṭabīb, I cannot judge, as no detailed information is accessible to me beyond the brief statements of Rieu, Ethé, and Pizzi; but the introductory verses of all three manuscripts vary. The opening lines of Khwājū Kirmānī's poem, according to Rieu (*Catalogue*, ii. 622), run:

بنام نقشبند خلوت خاک. عذار افروز مه رویان افلاک

The manuscript of Jalāl Ṭabīb begins thus, according to Rieu (*Catalogue*, ii. 867):

ثنائی در خور آن حضرت پاک نیاید در وجود از ذرّۀ خال

The beginning of the Columbia manuscript, on the other hand, is different from both the others, and runs as follows:

خداوندا دلم را تازه گردان رضائی را بلند آواز گردان

So much may be said by the way of general introduction. We may now turn directly to the work itself.

The manuscript as it lies before us makes a volume of 66 folios, each measuring $12\frac{1}{4} \times 7\frac{1}{8}$ centimeters, size of the written portion, 21×11 centimeters size of the whole page. It is bound in maroon leather, and the tops and edges of the pages are appropriately gilded. The first page is illuminated and the remaining ones are sprinkled with gold and framed with gilded marginal lines.

The writing is in a good clear *ta'liq* hand, two columns of 12 lines to the page.

Among the peculiarities of the writing may be noticed the occasional use of ج for چ. In cases where the long straight line is used for the letters س and ش, the former is sometimes distinguished by three dots below the line (ـۛ).

Turning to the meter of the poem, it may be added that the work is in the *mathnavī* (مثنوی) form, and consists of 1560 rhyming couplets. It is divided into 126 sections, which are indicated by rubric headings in the manuscript.

The first six sections (§§ 1-6) of the poem are devoted to an invocation of God for divine grace and inspiration for the task, and there are the usual ascriptions of praise to the deity and to his prophet Mohammed, whose ascent into heaven is briefly described according to the Koran. The seventh section (§ 7) is a eulogy of the great Moghul ruler Shāh Jahāngīr (شاه جهانگیر), to whom it should be said that the writer dedicated his poem. The eighth section (§ 8) is a reflection on the existing lack of faith in the world. In the ninth section (§ 9) the author recounts the inspiration he has received in a dream to

write the book. With the tenth section (§ 10) the poet is at last ready to begin the romantic story, the narration of which occupies the remaining 116 sections. The main parts of it may be briefly epitomized in the following paraphrase.

In the country of Nau Shād (نوشاد) in Persia (?) there was a great and famous king named Ferrukh (فرخ), whose happy reign was marred by the sad fact that he had no son to succeed to the crown. After many years of expectation and earnest prayer, a son was at last born to him on the first day of the new year. It was for this auspicious reason that the child was given the significant name of New Year's day, or Naurūz. The birth and childhood of the boy are depicted in a section (§ 11) of 20 lines. While still in his boyhood the future hero became well versed in every branch of science and learning; and in time, when his strength waxed, he grew also to be a mighty hunter, an accomplishment which was as much admired among the ancient Persians (cf. Herodotus, i. 136, and Xenophon's *Cyropædia*) as it was in the days of Nimrod or Behram Gur.

The poem then proceeds to descant upon the charm and attractiveness of the youth's personality, and recounts how on one occasion, Narcissus-like, he was struck by the marvelous beauty of his own face, which he saw reflected in a cup of wine. When the power of the wine of which he had partaken overcame his senses, Naurūz fell asleep, and in his dream beheld a vision of a lovely maiden, a girl of surpassing beauty, the fair Rose. He became intoxicated with the charm of the lovely vision, and, like Shelley's *Alastor* in search of the Arab maid, our gallant Naurūz betook himself to the desert, trying to realize in waking the truth of his rapturous dream.

In his wanderings he encounters a caravan and falls in with a member of the company who bears the name of Nightingale, Bulbul, and the latter extends to him the hand of sympathy in the longings of his heart. Bulbul tells him that the image he beheld in his vision was none other than Gul, the beautiful daughter of Mushkīn Shāh of Ferkhār, which was the native land of Bulbul himself (§§ 12-19). Upon hearing this, the joyous Naurūz despatches Bulbul at once to Ferkhār, to seek for Gul and to convey to her the message of his love (§ 20).

The faithful Bulbul succeeds in obtaining the Shāh's consent for his daughter to be betrothed to Naurūz; but the suit of the

lover is opposed by a cruel woman, Sūsān (سوسن) by name, the governess of Gul. After being rebuked by Gul and liberally bribed by Bulbul, Sūsān is won over, and not only makes an apology to Gul but even acts as a go-between (§§ 21-29).

But the tardy foot of time moves more slowly than ever for the impatient Naurūz, whose anxiety allows him no repose and impels him to wait no longer for the lingering Bulbul to return. He wanders again into the desert. Upon seeing his son's distress, Shāh Ferrukh decides to send Naurūz with a large army and vast treasures directly to Ferkhār.

On the way, Belman (بهمن), the chief officer accompanying Naurūz (he is spoken of as an Abyssinian (حبش),—unless *habaš* is simply 'servant' here), opposes the young lover's plan of going to Ferkhār, saying to Naurūz that it would be a great humiliation in case Gul should refuse his suit (§§ 30-39). Failing to induce the ardent Naurūz to return, Belman takes a large portion of the treasures and of the army, and goes back to the capital by night. Naurūz, however, arrives safely at Ferkhār and is welcomed by Shāh Mushkīn, the father of Gul. His suit is presented in person, and every preparation is made for the young prince to receive the hand of the maiden (§§ 40-58). But an obstacle unexpectedly arises; a rival appears on the scene. The Khāqān (خاقان) of China sends a more imposing embassy for the purpose of securing the hand of the lovely Gul for his own son. His suit is crowned with the Shāh's favor; he wins the day, and carries off the unhappy Gul on the road to China (§§ 59-73). But Naurūz follows the party on the journey eastward (§ 74). One stormy night he tries to carry off Gul to his own country (§ 75); but the pair is overtaken in the mountains, and brought back as captives by a slave of the Khāqān, who is named Yeldā (یلدا) (§§ 76, 77). Nothing daunted, however, the lovers make a second attempt to escape, and this time they succeed. Gul, according to the custom of the country, is sent to the temple to learn the method of worship. Naurūz also finds his way thither, but both of them being conscience-stricken at the practice of idolatry, determine upon flight. The Khāqān and the whole of Āīn and Māīn (چین وماچین) are greatly excited; men are sent in every direction in pursuit, but without success. Gul and Naurūz with great

difficulty escape an assemblage of *daens*, whom they meet in the desert. Soon after this they arrive at the palace of the Sheikh of Najd (شيخ نجد), who attempts by means of a witch's charms to win the heart of Gul. When she and Naurūz perceive this they leave Najd (§§ 78-82). They manage to reach Bahṛ Qulzum (بحر قلزم), ancient Clysma, and, after the familiar manner of both Eastern and Western mediæval romance, embark in a boat, which soon suffers shipwreck in the gulf of Oman. All this, as my friend Professor Jackson reminds me, sounds much like incidents in the old English romances or the *Gesta Romanorum*. Though separated, the lovers, of course, are not suffered to perish. Gul, floating on the sea, is found by a diver (غواص) in the pearl fishery of the king or prince of Aden, which is one year's journey from China. The diver brings her to the shore to take her to the king. On the way they encounter several fierce lions, which she kills on the spot. The report of her prowess soon spreads abroad. The king of Aden has her summoned into his presence, and charmed by her beauty as well as by her heroism receives her with great honor (§§ 83-98).

The fortunes or misfortunes of Naurūz are equally romantic. He floats on a piece of timber to the Arabian shore, and enters a fisherman's hut close by the sea. The fisherman, being too poor to supply his needs, informs the Vizir, who also dwells near. The Vizir, after entertaining Naurūz for a while, takes him to the king of Yemen, who honors him with high office and rank (§§ 99-107).

But an old-time feud existed between the king of Yemen, to whom Naurūz had gone, and the king of Aden, in whose army Gul was commissioned. So chance brings it about that war is declared between these hostile rulers. The story of the conflict follows. After several engagements, circumstances dramatically bring Naurūz and Gul face to face in battle. Each recognizes the other, and the result may be imagined. The war is stopped at once and lasting friendship is established between the two kings (§§ 108-118). Gul and Naurūz, by the permission of their kings, make a pilgrimage to Mekka and Medina.

Meanwhile the kings Ferrukh and Mushkīn Shāh, from the time they hear of the flight of their children from China, are in

a state of great uneasiness, and wander about the world in search of them. Finally they also conclude to make a pilgrimage to the sacred land, to pray there for the restoration of their dear ones. At Mekka the parents and the children meet unexpectedly and have a happy reunion. The party returns home in peace, and Naurūz succeeds his father at the latter's death (§§ 119-126).

Such, in brief, is the romance of Gul and Naurūz. The whole story, as it seems to me we are justified in believing, contains certain mystic elements. The names of Gul, Naurūz, Sūsan, Bulbul, etc., may be not without symbolic significance. The Persian New Year occurs in the Spring, and the love of the springtime for the nightingale is as old as Persian lyric poetry. The lily belongs rightly amid the same mystic company of flowers; and numerous other symbolic phrases like the 'fervent heat of Naurūz,' 'love opening the breast of the rose,' or 'the sunny days of the spring time causing the bud to blossom,' recall the allegorical energy of the Iranian mystic poets.

In conclusion I may say that I hope to gather some more details regarding this interesting work in connection with the other Persian poems that bear the same title.

Remarks on the Form of Numbers, the Method of Using them, and the Numerical Categories found in the Mahābhārata.—By E. WASHBURN HOPKINS, Professor in Yale University, New Haven, Conn.

THESE Remarks on Numbers are incidental notes which I made a short time ago, while collecting from the great Hindu epic some material intended for another purpose. They were presented in outline as one paper at the meeting of the Society in April of this year, but as they are rather too long to be printed all at one time in the *Journal*, I purpose to bring them out in sections in successive half-volumes. The general plan of arrangement is as follows:

The form of epic numbers.

How numbers are handled in arithmetical processes.

How space (dimension, etc.) is measured (norms and syntax).

Time-words and methods of measuring time (months, asterisms, etc.); syntax of time expressions; time-phrases; age; epic dates (excursus).

The epic world according to the categories of the poets (physical, ethical, etc.).

Various problems, historical as well as philological, serve to relieve the dryness of the subject, but these will be touched only by the way, as my chief object is to get data together, though I have not avoided mention of obvious differences in matters pertaining to the growth of the epic. The present paper includes the first three divisions. The next will treat of time-words (to epic dates), with subsequent divisions according to circumstances.

Before taking up seriatim peculiar forms of numbers, I would call attention to certain fanciful number-words which belong to the later epic. The most striking of these is *daṣārdha*, not merely as “five,” *daṣārdhasaṁkhyāḥ* (*ṣarāḥ*), i. 188. 20; *daṣārdhahavirātmakāḥ*, xii. 47. 42,¹ but as “fist” (the half-ten fingers):

¹ Compare the abstract, *daṣārdhatā=pañcatva*, xii. 187. 27, dissolution into five elements (ib. 291. 10, *daṣārdhapravibhaktā*).

xii. 114. 20, *kruddho daṣārdhena hi tādāyad vā*.

Analogous is *pañcaśākhā*, "having five branches," the hand:

xi. 17. 30, *svaṣīraḥ pañcaśākhābhyām abhihatya*,

which illustrates Nala v. 5. In the Rāmāyaṇa, vi. 59. 55, this word is still an adjective to *bāhu*. Compare RV. x. 137. 7, *daṣaśākhābhyām* (*hastābhyām*).

I have elsewhere suggested that the word for four appears to be a combination of "three and." That the digits, as well as the higher numbers, were indicated by addition is shown by many examples of "and" combinations to express them, for example, in i. 234. 15, six is expressed by "five and one," *pañca cāi 'kan ca*. Double-six (*ṣaṭka* for six) reflects a common doublet, the year consisting of two six-month "courses" of the sun, *dviṣaṭkapaḍayāmīn*, xi. 5. 15. Such "double" terms are not rare: "double-five-headed," *dvipañcaṣīrasaḥ keṣit*, v. 103. 7; *dvipañcarātra*, iii. 230. 37; *dviṣaḍakṣa*, "with twelve eyes," xiii. 86. 19; while for twenty-one, "thrice seven" is normal, *trisaptan*, sic, *triṣaptakṛtvāḥ*.

I have no record of alternate adjective numerals, such as *dvitva* or *tricitura* among epic material; but unexpressed alternates are found: "five or six mouthfuls," *pañca ṣaṭ*; "for seven or eight days," *saptāṣṭa divasān*, v. 160. 40; "even (opposed to fifty) five or six or seven," *api vā pañca ṣaṭ sapta*, vi. 3. 83, also xii. 102. 21; "of ten or twelve" (years), *daṣadvādaṣa*, iii. 188. 60. Compare *dvyeke-*, "of two or of one," Manu, x. 7. For triad, *tritayam* and *trayam* (in i. 2. 329, etc., *catatrayam*) are used indifferently; in xiii. 111. 18-19, side by side:

*dharmāḥ cā 'rthaḥ ca kāmāḥ ca tritayam jīvite phalam
etat trayam avāptayam.*

This is the usual triad to be desiderated, but it is often alluded to as a triad without definition, as in ix. 64. 21, *tritayam sevitaṁ sarvaṁ*. It is possible that it means trinity in xiii. 147. 53, where Ṣiṇa says of Viṣṇu:

*tatra ca tritayam dṛṣṭam bhaviṣyati na saṁçayaḥ
samastā hi vayan devās tasya dehe vasāmahe,*

though even here it may, as usual, be equivalent to the *trivarga* called *tritaya* above (rather than the three times, as suggested in PW.). *Tretā* for triad is rather affected in the later epic

and (without the implied complement) stands alone for a Yuga and for the group of three fires (ref. PW.); *trika* is used sparingly, *pañcatrika*, having a triad of five, fifteen; *tritya* is a late solecism (ref. below). A group of four is *catuṣṭayam* or *catuṣ-kam*; a group of five, *pañcakam*, etc.

Metaphorical number-names I have illustrated by a passage cited in my *Great Epic*, p. 206, where *garāgni* is 5×7 . The passage, however, is late and unique in the epic.

I turn now to the regular numbers.

The epic is not so careless of art as to change the grammatical form of all the numbers, but it contains several abnormal numerals. I shall speak of the form of the numbers three, four, seven, eight, nine, ten, adding something on derivatives of the word for one, and the use of the higher numbers.

Tri. In the Sanatsujāta Parvan, which is a late imitation of ancient matter, occurs this verse :

v. 43. 15, *tathā nṛgaṁsāni daṣa tri, rājan.*

In ḡl. 19 are mentioned seven cases of cruelty, which apparently led Telang, *SBE.*, viii. p. 168, to translate the words above "and likewise the seven cruelties." But the seven of ḡl. 19 are expressly differentiated from six that precede, *ete pure sapta*, "seven other cases," and it is these six and seven together which make up the thirteen, *daṣa tri*, mentioned in the introductory fifteenth ḡloka. Consequently, Nīlakaṇṭha is right in saying that *daṣa tri* is for *trayodaṣa*, or, in other words, *tri* here stands for *trīṇi*.

In the last number of this *Journal*, xxii, p. 345 ff., I pointed out an epic case of a dropped ending, *daṣa-dvādaṣabhīr vā 'pi*, where the *vā* shows clearly that *daṣa* stands for *daṣabhīh*, which has lost its ending because it is supplied by the next word.¹ A still more extraordinary case of dislocated ending is found in that book which historical critique has pronounced later than the early epic:

iv. 62. 14, *avaruddho 'carat Pārtho varṣāṇi tri daṣāni ca,*

¹ The meter here shows that the corrupt form is intentional. The case differs, therefore, from that of the ÇB. *yajus*, *Mitrāya Varuṇāya ca*, which all MSS. of JB., Professor Oertel informs me, have as *Mitrā-varuṇāya ca*, since the latter form spoils the meter.

where *tri daṣāni* stands for thirteen. Here we cannot read *tri-daṣāni*, for two reasons. First, this word means thirty and not thirteen, and thirteen is the required meaning. Second, even if we took *tridaṣāni* as an adjective meaning thirteen, there would still remain the *ca*, which only a very strained interpretation could dispose of otherwise than as Nīlakaṇṭha has said (*trīṇi ca daṣa ca*). There remains only the explanation that in *tridaṣāni* the poet has transposed the endings for metrical purposes and not only written *tri* for *trīṇi* but *daṣāni* for *daṣa*, helped thereto undoubtedly by the preceding *varṣāni*. Such a monstrosity is one that need not surprise us among the many evidences of lateness found in the Virāṭa, which, as a whole, lies nearest to the pseudo-epic in its disregard of Sanskrit grammar as in other particulars. So in Virāṭa we find the slovenly construction of iv. 39. 10, *jītvā vayanī nesṣyati ca 'dya gāvaḥ*, "conquer us and carry off the cows," a verse admitted by Nīlakaṇṭha (compare 47. 34), and quite comparable with the looseness of form found in Ḍānti.

The PW. has already noticed, i. 113. 21, *vīhṛtya tridaṣāniṣāḥ*, for *triṇṣat*; *tridaṣāu*, iii. 123. 1 (*Aṣvināu*); and *tridaṣāḥ*, $3 \times 10 (=33)$ gods, *passim*.

Catur. Professor Holtzmann, in his *Anhang* to Whitney's *Grammar*, § 482, mentions *caturāḥ* as nominative in xii. 24. 27 and *catur* as accusative, *vedān*, in iii. 45. 8. Both forms are found elsewhere as well. In vii. 149. 22, *gāyanti caturo vedāḥ*; vii. 202. 74, *vedān kṛtvā 'tha caturāḥ catur aṣvān maheṣvaraḥ*. Also in viii. 34. 70, *tathāi'va vedāḥ caturo hayāgryāḥ*. All these passages are late laudations or describe metaphorical "cars" of religion, the four Vedas being made the steeds. Unique is viii. 20. 49, *sa tu dvipaḥ pañcabhir uttameṣubhiḥ kṛtāḥ ṣaṣṭaṅgaḥ caturo nṛpaḥ tribhiḥ* ("the elephant with five arrows made six-fold [cut into six pieces] and the king with three (arrows made four)"), *kṛto daṣāṅgaḥ kuṣalena yudhyatā yathā haviḥ tad daṣa-dāvutaṁ tathā* ("was made ten-fold [cut into ten pieces] by the skillful warrior, like an oblation offered to ten divinities").

Here *caturāḥ* is plainly *caturāṅgaḥ* in sense, but as to the form, it is difficult to say whether by analogy with late compounds in *catura* it is nominative singular, or by analogy with "make one four" accusative plural, or by analogy with the cases above, nominative plural. I think it belongs to the last

group, "made-six-fold, made four." The awkward sentence means as a whole that the six parts of the elephant and the four parts of the king were like an oblation cut into ten parts.¹

Saptan. By analogy with the cases already mentioned it may be suspected that *sapta* stands for *saptasū* in xii. 343. 106, where Kaṇḍarika is said to have arrived at Yoga-perfection because of his excellence, *mukhyatvād*, "reflecting often on the sorrow caused by birth and death, *saptajātisū*." The commentator says "the sorrow of seven births," *sāpta-jānīkām*, which would imply "in seven births," and not the compound "among those having seven births," which is the natural interpretation. As to the meaning, it is probably the indefinite sense of "many," which in most examples is hard to verify (i. e. to show that 'seven' is used without any reference to a fixed number). For in "seven paces," "seven flames," "seven seers" and "seven rivers," seven, for all we know, may have been intended literally. There are two cases, however, where *saptan* clearly means "many" simply; once where, instead of elephants *tridhā prasravantaḥ* (an oft-repeated phrase), we find *saptadhā*; for the parallel *sarvataḥ* is used in the same way:

i. 151. 4, *trihprasrutamadaḥ*,

vi. 64. 58, *tridhā rājan prasravanto madam bahu*,

vii. 26. 6, *kṣarantaḥ sarvato madam*,

vi. 95. 33, *saptadhā sravatū madam, parvatena yathā toyam
sravamānena sarvagaḥ*.

The second case is where *bhuvanāni viṣṇā* interchanges with *bhuvanāni sapta*, or, in the gender of the later epic, *bhuvanāḥ sapta* (see hereafter).

Aṣṭā. The final vowel is short or long according to metrical convenience, long when the length is indifferent:

iii. 102. 3, *aṣṭiḥ paṭam aṣṭau ca nava cā 'nye*,

aṣṭau required by the meter;

vii. 146. 134, *akṣāuhīṇīr aṣṭa hatvā*,

aṣṭa required by the meter;

¹ The *havis* called *daṣadāivatam*, represented here by *daṣāṇca* (the man and elephant together) "in ten parts," is called *daṣāṇço homaḥ* in xviii. 6. 105.

xiii. 111. 69, *bhūtvā nīno 'ṣṭa varṣāṇi*, also required.

v. 86. 9, *daṣṭā 'ṣṭa ca*, and vii. 82. 8. and 16, *ṣaṭam aṣṭa ca*, cases of diiambus, brevis required;

ix. 46. 74, *mahiṣam eā 'ṣṭabhiḥ padmāḥ*, short vowel required;

viii. 22. 6, *aṣṭābhīr api, Bhārata*, long vowel required; ib. 17, *Nakulāya ṣaṭāny aṣṭāu*, indifferent.

Respecting the alleged difference between *aṣṭāgava* and *aṣṭagava*, PW. i. 531, there are two verses, one of which is

viii. 67. 6, *aṣṭāgavām aṣṭa ṣaṭāni bāṇān* (sc. *vahanti*),

which Nīlakaṇṭha interprets as "eight eight-cow wagons carry hundreds of arrows," his *teṣām aṣṭāgavām* implying a short genitive modelled on *gavām* (*aṣṭāu gāvo yasmiṁś tat aṣṭāgavāni ṣaṭāni teṣām aṣṭāgavām aṣṭa aṣṭasamīkhyāni ṣaṭāni, nuḍabhāva āraṣṭh, ṣaṭāni bāṇān anekaṣaṭasamīkhyān vahanti*). One is tempted to read *aṣṭāgavāny*, as in the next passage, which, however, has the short vowel:

viii. 20. 30, *aṣṭāv aṣṭāgavāny āhātḥ ṣaṭāni yad āyudham ahnas tat aṣṭabhāgena Drūṇiḥ cikṣepa, mārīṣa*,

"Droṇa's son, Sir, threw as many missiles in an eighth of a day as eight eight-cow wagons carry," which repeats with elaborate definiteness the statement of the preceding verse that the hero poured arrows as Pūṣan's "younger brother," Pūṣānnja, that is Parjanya, pours rain. The scene is late and instructive for the critique of the epic. The hero here particularly lauded is a certain Pāṇḍya, quite unnoticed previously but now extolled as the ablest warrior on the Pāṇḍu side. It is he who, as explained above, is quartered and made with his elephant a ten-fold oblation. There appears to be no grammatical difference between *aṣṭāgava* and *aṣṭagava*.¹

In regard to *aṣṭacakra*, the Petersburg lexicon gives only the Vedic *aṣṭacakra*, but *aṣṭacakra* is found (of Hari's wagon, *yāna*) in vi. 8. 16; xii. 335. 11; and (of a demon's car, *ratha*)

¹ Compare for these compounds, *hastiṣaḍgava*, viii. 38. 7, of a war-car, and *ṣaḍgavīyaṁ ṣaṭāṁ*, ib. 76. 17. In xii. 37. 32, sixteen cows are yoked to a war-car.

in vii. 156. 61; 167. 38; 175. 13; and (of an *aṇu*) in vii. 175. 96. In the first three Droṇa cases, *samāyukta* is added, a set formula. In the first case, from Bhīṣma, the word also begins a *pathyā* and the whole verse is repeated in the next Çānti case, *astācakraṇi hi tad yānam bhūtayajaktam manoranamam*. As the last case, too, stands at the head of a *pathyā* and in this situation *astācakraṇi* would be metrical, the choice must be due to preference for the later form.

Nava. The Vedic phrase *jaghāna navatīr nava* I have already, *Journal*, vol. xxii. p. 389, located in the epic, ii. 24. 19. To this example should be added also the same phrase occurring at ix. 51. 36 and xii. 22. 11. The last is farthest removed in context from the original, while the passage in Çalya gives the Vedic text very closely in making the weapon the bones of Dadhīca (epic form):

RV. i. 84. 13, *Indro Dadhīco astabhir vṛtrāṇy upratīṣkutaḥ
jaghāna navatīr nava,*

Mhb. ii. 24. 19, *yena (rathena) Çakro dānavānām
jaghāna navatīr nava,*

ib. ix. 51. 36, (*Dadhīca, tasyā 'stibhiḥ*) *dāityadānavavīraṇām
jaghāna navatīr nava,*

ib. xii. 22. 11, ("Indra the son of Brahman became a Kṣatriya
by his acts and") *jñātūnām pāpavṛttinām
jaghāna navatīr nava.*

In each case (but the first is not annotated) Nilakaṇṭha says that the number is (not ninety-nine but) eight hundred and ten (nine nineties). In i. 32. 24, *navatyā navatīḥ (kṛtvā)*, v. 1. *navatyō*, the multiplication is definite, 8100.

To the forms recognized in grammars and lexicons I am tempted to add *navāḥ* as instrumental plural. Otherwise we must assume that *new* arrows are especially used when their number is ninety, whereas generally there is a natural predilection for such conjuncts as six and sixty, seven and seventy, and nine and ninety. So by analogy with *navatyā navabhiḥ ca* in viii. 30. 25 we find *navāir navatyā ca śarāḥ* in viii. 90. 60. At the same time, "nine" and "new," owing to their like sound, are found together, as in viii. 48, 50, *navāir navabhir āyasāḥ*, but in the case above *ca* seems to show that *navāḥ* is a numeral.

I would remark, by the way, on the partially formulaic character of most of the shooting in the battle-scenes. The test of an archer's skill is not only to shoot one arrow well but to shoot many arrows at once. Among digits the object shot at determines, for the main part, the number of arrows used. With four arrows one shoots the four steeds; with three, the arms and forehead or the three charioteers, etc. But even here there is an occasional irruption of eights, the favorite number of the later epic. Thus in viii. 89. 63, ten and eight; 65, eight; 68, eight hundred and eight thousand; 76, eight; all in a bunch, though up to this passage the whole preceding eighty odd sections show only half a dozen cases. So in the late wonder-tales of the first book, larger numbers are by preference expressed in terms of eight or its multiples, e. g., i. 100. 20, to express thirty-six years, "years sixteen and eight and also four and eight more." I shall have occasion in a later section of this paper to show how this Buddhistic number has driven out the more ancient holiness of nine.

In the "down-pour" of arrows said to be shot by decades there is a certain preference for stereotyped groups. Twelve, fourteen, fifteen, and sixteen are shot more often than seventeen and eighteen. Twenty-one, *trisaptan*, is a favorite for the same reason that endears *trisaptati*, as three and seven(ty) are sacrosanct numbers. In this decade, twenty-five is also a favorite, while twenty-seven is the rarest; in the third decade, thirty-six is the conventional number, with a few cases of thirty and thirty-two. The fourth decade is almost ignored; the fifth appears rarely as fifty; then come sixty and six and sixty (less common are three and four and sixty); seventy and seven and seventy (less common are two and three and seventy); eighty (rare); ninety (nine and ninety as above); and occasionally one hundred, three hundred, five hundred, and even ten thousand arrows all discharged from one bow at one shot!

Daça. The *dāṣatā* of vi. 2,700 (rightly condemned in PW.) is replaced in B. 61. 21, by *triṇṣatā*. The epic has *daṣati*, analogous to *saptati*, *navati*, not as decade but as one hundred (as who should say "ninety, tenty"), the form, however, being formulaic like *navatīr nava* (above), and probably a new formation, as it occurs only in the later part of the epic. The decisive cases as regards the meaning are (i. 16. 8-13 and) v. 108. 14, the latter:

Oṅkārasya 'tha jāyante śrayo daçaṭir daça,

where a "thousand branches" is Nilakaṇṭha's undoubtedly correct interpretation. In xiii. 30. 21, the ten might be decades or hundreds (of days), though here also Nilakaṇṭha admits only the latter and says the word is *Analogie-Bildung*.¹

Holtzmann, *op. cit.*, § 483, has spoken of *saptadaçesu* at iii. 268. 11. I think Nilakaṇṭha's explanation (having eight royal acts and nine *siddhis* and *śaktis*) is quite inadmissible. Families "having seventeen" would be more likely to be thought sinful than virtuous. Compare the "seventeen fools and sinners" of v. 37. 1-6. Then in v. 36. 22, the "great families" are defined as those which *ete saptaguṇa vasanti*, "seven virtues" being their possession, which suggests *saptaguṇesu* as the right reading. But here the meter alone is enough to change *saptadaçasu* to *saptadaçesu* (*vayam pūṇaḥ saptadaçesu Kṛṣṇe kuleṣu sarve 'navameṣu jātāḥ*).

Higher numbers. Nineteen is not *naradaça* in the epic but, as in Latin undeviginti, *ekonaviṅcati*.² In xiii. 107. 87, *ekonaviṅcat* serves as an ordinal, *ekonaviṅcati dīne* standing parallel to *soḍaça*, *saptadaçame*, *aṣṭādaça*, and *pūrṇe viṅçe* (*divase*). At C. xi. 561, *pariviṅcat* offers a form parallel to *triṅcat* (also *triṅcati*); but B. 19. 15 has *paçya Kṛṣṇa* for *pariviṅcat* (*Viriṅcatim*). In i. 2. 330, B. has *viṇcat*, C., *triṇcat*; ib. 379, *viṅcar chlokaçatāni*. The late Rāmāyana also admits *viṅcat* in *ekaviṅcat* (ref. PW.). The epic accusative of the following decades is frequently identical with the nominative; for example, in i. 86. 15, *abhakṣaḥ gaṛuḍas triṅcat*, either form doing duty for either case. Examples of *triṅcat* and *pañcāçat*, as accusatives of object and duration respectively, are given below, and in xiii. 168. 5 and 27, respectively, *pañcāçat* is accusative, *gaṛuḍarīḥ pañcāçat*, and *pañcāçatam* is nominative, *aṣṭapañcāçatām rātryaḥ çayānasyā 'dyā me gatāḥ*, as in the further case cited below. The corresponding ordinals in the text (the *adhyāyas* are counted by *-tama* forms as well) are short, *ekaviṅça*, *dvāviṅça*, *trayaviṅça*, *caturviṅça*, *pañcaviṅça*, *ṣaḍviṅça*, *saptaviṅça*, *aṣṭaviṅça*, *ekonatriṅça* (compare *ekonasaṣṭi*, *ekonasaṣṭati*, i. 2. 204, 289, etc.), xiii. 107. 93-121.

¹ For thousand the later epic uses *daçaçatam*: *tatthe 'śtīnāṁ daçaçatam prāpnuvanti*, xiii. 102. 36, etc. (meter, *Great Epic*, p. 305).

² Or *viṅcatir ekonā*, vi. 4. 15.

Before leaving this subject I would say a few words on certain declined forms of *eka*, not because they are irregular as forms, but on account of the way they are used. The first point is the parallelism between the adverbial ablative and the instrumental, as shown in

v. 43. 21, *tribhir drābhyām ekato vā 'rthito yaḥ*.

According to the commentator, *arthito* here means possessed of or furnished with, *artha*, a meaning not usually recognized, but in accordance with the sense of the passage, which says that one who has in his power all the twelve virtues is fit to rule the earth, while "he that is furnished with three, two, or one," is to be known as one having wealth, *tasya saam asti 'ti sa vedī-taryah*. In any case, *ekataḥ* is used freely here as a correlative of the instrumental.¹

The same form has a meaning almost recognized in the Pet. lexicon, which ascribes to it, besides the ablative sense and that of "on the one hand," the meaning of "together," or "in one." By a slight extension of meaning *ekataḥ* means altogether, solely, or, quite literally, one-ly, only, as in vi. 107. 20,

*yathā prajvalitām vahniṁ patanīgaḥ samabhidhravan
ekato mṛtyuṁ abhyeti tathā 'ham Bhīṣmam ūyivān,*

"As an insect entering a blazing fire meets only with death, so I, on having encountered Bhīṣma." This, at least, is Nīlakaṇṭha's exposition, who takes the word as equivalent to (*ekam*) *kevalam*, *mṛtyuṁ eva*, rather than as contrasting the insect "on the one hand" with the speaker. The plural *eke* meaning "alone" may be used as well as the singular, *nāi 'ke 'śanti susampannam*, "eat dainties alone," xii. 228. 44.

Examples of the correlation by two *ekataḥ* are not uncommon. One is found in

xii. 12. 12, *ekataḥ ca trayo rājan gṛhaṣṭhāṅgrama ekataḥ,*

where against the other three orders is weighed that of the householder, which is said to be equal to all the others put together.

¹ For the usual meaning if applied here would be "he who on the one hand is furnished with three or two." Compare the parallel use of *prathamataḥ* in xii. 82. 1, *eṣā prathamato vṛttir dvitīyām gṛṇu, Bhārata*.

In the following stanza I think we may see an extension of Vedic usage surviving in the epic:

xii. 21. 7, *anye sâma praçâsanti vyâyâmanam apare janâh
nâi'kam na cā 'pare kecid ubhayam ca tathā 'pare.*

The commentator admits the double negative as an affirmative and according to him the stanza would mean: "Some praise mildness, others praise a strenuous life, still others praise the one (Yoga-discipline, *dhyāna*), and others again praise both." But, although the affirmative double negative is not an impossibility, it carries with it a strength of affirmation¹ that is quite uncalled for in this passage, where *ekam* certainly has no right to be represented by *dhyānam*. In the continuation it is said that some sit in quiet meditation, some are active in governing, and others are *ekāntagūṇaḥ*, which may have led the commentator here to set up a third object of devotion. But with the antithesis of *ubhayam* there can be no doubt that *ekam* is one of the two already mentioned, and the meaning to be expected is that some praise mildness, some praise energy, some praise neither, and some praise both; which, in my opinion, is what the passage was intended to mean when it was first written. In other words, for *nâi'kam na ca*, we should read *nâi'kam ca na*, which preserved the old phrase found in BAU. vi. 2. 2, *nā 'ham ata ekam ca na veda*; ib. 3, *tato nâi 'kam ca na veda*. Otherwise *na ca na* survives only in indefinites, *na katham ca na*, etc. The sense of *nâi'kam* as "many a" is here excluded. This latter meaning is common, e. g., *nâi 'kam yugaviparyayam (avasaṃ)*, "many an age," xii. 229. 49.²

¹ It is used, however, generally, where two clauses are distinguished, e. g., *na cāi 'va na prayujñita, saṃkīrṇam parivarjayet*, "not that one should not commit (these faults, but) one should avoid excess," xii. 56. 42; or in strong affirmation, *na sa yajño na bhavitā*, i. 38. 2, "it will surely occur;" *nâhi tvām no 'tsahe hantum*, xii. 227. 80, "assuredly I can kill thee." Compare the parallel in the same scene (repeated) in xii. 224. 38, *evam nâi 'va na cet kâlāḥ . . . pātayeyam aham tvā 'dya*, "I could kill you now; if it were not so, if Time did not (prevent)." Compare xii. 239. 4-6, ending *etad evam ca nâi 'vam ca na co 'bhe nā 'nubhe tathā*.

² In xiv. 49, a similar but longer string of opinions is given by *kecit*, *anye*, *apare*, and *eke*, indifferently, ending with çl. 12, *sarvam eke praçâsanti na sarvam iti cā 'pare*, "some praise everything and others nothing."

In regard to the choice between *eka* or *ekatara*, the epic uses either, as in xii. 81. 9, *vṛṇomy ekatarāṁ na ca*; 10, *ekasya jayam āgauri*, ("like the mother of two gamblers) I prefer neither, hope for victory of the one." In i. 119. 15, *vāsyaī 'kaṁ takṣato bāhūni candanēnāi 'kam ukṣataḥ nā 'kalyāṇaṁ na kalyāṇaṁ cintayāṁ ubhayaś tayoh*, "not thinking ill or good to appertain to [these both] either of these, him cutting one arm with an axe and him anointing one with sandal-paste" (for *anyataram*). In triads, one, another, and a third, *anya, upara, para*; *eka, upara, eka*, and so forth, xii. 86. 30; 137. 4. Though *katara* is used quite regularly, *kim* may take its place, as in xii. 126. 16, where, after two are mentioned, we find *kiṁ nu jyāyastaram*, "which (of these two) is more greater?" So *katama* and *ka*, xii. 167. 2.

On the form of other epic numbers I may refer to what has already been given in the Petersburg lexicon and in Professor Speyer's *Sanskrit Syntax*. I will only register another *pañcāṣatam* (*pañāḥ proktāḥ*) for *pañcāṣat*, xii. 256. 8, and observe that *dvīsaptatī* appears in Manu, vii. 157, but epic *dvīsaptatī* (in the same passage) at xii. 59. 71; at the same time remarking as to *ṣatā* for *ṣatāni*, in iii. 67. 6, where C. has *ṣatām ṣatāḥ*, that masculine *ṣata* belongs to the more recent parts of the epic, whence *ṣatā*, like *viṣvā*, may have been the original. As to the feminines, *triṣatī*, etc., which have been noticed by Speyer, *op. cit.*, § 294, these forms are also late in the epic, *triṣatī* and *saptatī* (i. 2. 324) and cognate forms are found in still later works. Further: besides *daśaṣatam*, above (and *daśasāhasram*), "a ten-hundred," there is the uncommon uncompounded singular form (as if plural), as in xiii. 112. 14-15, where, parallel to *daśaṣatām vedavidām* (in ḡ. 28), appears *brāhmaṇānām ṣatām daśa*.

The question as regards appositional construction may be discussed here though it pertains to syntax rather than to form. All substantive numerals may take this construction, *śahasram parivatsarān*, i. 94. 41, etc., which is not irregular if we understand "years, a thousand," rather than "thousand (of) years." But with the higher numbers the noun is usually either compounded, *varṣāyutāni*, etc., or is in the genitive, *puruṣamedhānām ayutam*, i. 95. 20.

The particular example just given has indeed a sort of stereotyped form, especially when "eleven thousand years" are referred to. As one says *bahuvārṣaganān*, "many year-rows," e. g. xiii. 111. 98, so one says year-hundreds or thousands, *pañcavarṣagata*, etc., and uses a formula with eleven, ten thousand and ten hundred: *daśa varṣasahasrāṇi daśa varṣagatāni ca*, iii. 12. 12; *daśa kalpāyutāni*, ib. 200. 121. A modifying number is placed in the same construction, as a general thing, *ayutāni pañcāṣat* (accusative) with genitive, xiii. 107. 31; *yud-dham varṣasahasrāṇi dvātrīṇcat abharat kila*, "the war (of the gods and their elder brothers, the devils) lasted thirty-two year-thousands," xii. 33. 26. But here also a genitive is often found (more correct), *dve yugānām sahasre*, xiii. 107. 113, etc., and an inverted order, as in *ṣatavarṣa*, not as adjective but noun, is permitted, *vāyasaḥ ṣatavarṣāṇi (jīvati)*, xiii. 111. 86 (compare *ṣatāyudam*), in this instance due, perhaps, to the meter (to avoid a third *vipulā* after a trochee), but found also ib. 118, *kṛmīr viṅcativarṣāṇi*. The very unusual construction found in i. 90. 1 is probably due to meter also. Here we have *sanivatsarānām ayutāni ṣatānām*, "a ten-thousand of hundred years." Close by occurs another case of apposition, i. 93. 24, *tadā 'dadān gāḥ gatam arbudāni*, "then I gave cows, a hundred hundred-millions."

An adjective may or may not agree with the implied genitive; both together, for example, in iii. 127. 2 and 13, *bhāryāṣṭatām sadṛcīnām* and *sadṛcām*. Possessives, by the way, put the numeral either first or last, with possessive ending, *daśagu, sahasragu, goṣṭin*, xiii. 78. 11. Compare with the last, ib. 102. 43, *yo gosahasrī ṣatadaḥ sanām samām, gavām ṣatī dadyāc ca*.

In regard to the syntax of decades, both genitive and apposition are common, and, beginning with *viṅcati*, we find, for example, *sanisārām viṅcatīm*, xiii. 111. 117; *trīṇcat agnīm (ayajām)*, xiii. 103. 36. An interesting case historically is found in xii. 335. 35-37, *ekaviṅcatir utpannās te prajāpatayah smṛtāḥ*, not only because "twenty-one Prajāpatīs" are late-epic, but because in the twenty names given as those of the sons of Nārāyaṇa one has been left out, the list being Brahman, Sthānu, Manu, Dakṣa, Bhṛgu, Dharma, Yama, Marīci, Aṅgiras, Atri, Pulastya, Pulaha, Kratu, Vasīṣṭha, Parameṣṭhin, Vivasvat, Soma, Kardama, Krodha, Vikrīta.

The singular noun (an unusual case, compare Speyer, *S. Syntax*, § 294) occurs with *triṅcat* in xiii. 101. 15, *narakam triṅcatam prāpya* (v. l. in C.). The plural decade also is found in the later epic, e. g. *triṅcato 'bdān*, xiii. 103. 34.

The word *viṅcati* gives the name *Viviṅcati*, a hero whose foregone fate is to be attacked with twenty arrows, in a repeated phrase: *Viviṅcatim ca viṅcatyā viratham kṛtarān prabhuḥ*, vi. 117. 44=vii. 14. 27, etc. Such number-names are not confined to this hero and the three wise men, *Ekata*, *Dvita*, *Trita*, as they are found also in the satyrs' names, *Aṣṭaka* and *Navaka*, *Skanda's* goat-faced sons, iii. 228. 12; and in xiv. 4. 5 are mentioned *Ikṣvāku's* descendants *Viṅca* and *Viviṅca*, who are unknown to the early epic but appear in the Purāṇic literature and the pseudo-epic so clearly associated with it.

An ordinal may be employed to take the place of a cardinal prefixed to another cardinal, as in i. 95. 37, *caturviṅcam putracatam babhūva*, "a twenty-fourth son-century was born," that is one hundred plus twenty-four, which leads eventually to *caturviṅca* being used for *caturviṅcati* as in *caturviṅcākṣarā* for the *Gāyatrī* in the *Harivaṅca* (v. PW.), a meaning that may belong to the passage above as well.

The ordinal may (but does not generally) agree with distributed singulars, although combined with one, as in the verse of ii. 77. 31 repeated at xiii. 148. 61, *Duryodhanasya Karpāsya Śakunec ca . . . Duḥśāsanacaturthānām bhūmih pāsyati coṇitam*. The ordinal in such a phrase as "five went and she too (as) sixth" needs no comment, and almost as common is such a turn as "they five set out having her (as) sixth;" but "with self as" is probably a late locution, though like the Greek idiom. It is found in (xii. 177. 52, *ātmanā saptaṁam kāmam hatvā*) the same passage from which examples of these constructions may be taken, namely, "seventh with himself (instrumental) went the king," xvii. 1. 23-25, *prasthitān Drāupadīṣaṣṭhān . . . bhrātaraḥ pañca Kṛṣṇā ca saṣṭhī evā cāi 'va saptaṁaḥ*, followed by *ātmanā saptaṁo rājā niryayāu Gajasāhvayāt* (late addition to Pāṇini, vi. 3. 6, PW. Rām. examples). As *ātmanā*, plural reflexive in singular, is not very fully illustrated in PW., I will add *nāthavantam ivā 'tmānam menire*, "they regarded themselves as having a savior," i. 183. 10.

The word *dvitīya*, "second," passes in compounds from the meaning "having as second" to that of "with," and independently to that of alter (ego), i. e., a friend. Familiar examples are those given by Speyer, *chāyādvitīya*, "(doubled) with his shadow," *asīdvitīya* "seconded by his sword." An example of the personal construction is *Yayudhānavitīya*, "along with Y.," xiv. 66. 11¹ (compare *dvitīyavat*, with instrumental, iii. 313. 47); *me dvitīyagḥ*, "my friend," xiii. 102. 57. The idiom, though perhaps not new, is not often used,—generally in late passages. Another case occurs in v. 50. 26, *Kṛṣṇadvitīyagḥ*, a passage not removed from the suspicion of being a late adornment.

The second ordinal answers to our "another" in such phrases as *dvitīyasāgarānibha*, "like another ocean;" while the "same" is expressed by the first cardinal: *ekaduḥkḥlāḥ pṛthaksukhlāḥ*, "having the same sorrows but separate pleasures," i. 10. 4 and 50; *ekārtha*, *ekabhojana*, "having the same aim, food," etc.²

Ordinals are occasionally used to indicate time. First in time, as contrasted with a subsequent event, is, indeed, generally given by *pūrva*, "former," *pūrvārāpāni*, "preliminary symptoms," xii. 228. 1; or *purastāt*, "previously," i. 189. 22; but *prathamam* is used in the same way, *prathamam . . . paścāt*, "at first and afterwards," xii. 227. 68, etc. A "second time" is *dvitīyam*, iii. 60. 7; *dvīḥ pūrvam idam tṛtīyam*, "twice before and now for the third time," iii. 92. 9; *pūrvam . . . punaḥ . . . idam tṛtīyam*, "first, then again, and now for the third time," xviii. 3. 35; often as adj., *esā tṛtīyā jījñāsā tava kṛtā*, "this is the third examination you have taken," ib. 32.

Before passing on to the epic methods of indicating arithmetical processes in detail, I may remark that with the exception of time (and religious observances),³ where the duodecimal sys-

¹ The next stanza, xiv. 66. 12, has a form not recognized in the lexicon, *pitṛsvasām*, as compared with the regular *pitṛsvasāram*, the latter found in v. 90. 1; viii. 87. 16; xiv. 52. 53. Another late passage, vi. 116. 3, has *svasām* (like *dulātām* in Virāṭa; the last noticed by Holtzmann, *Anhang*, § 371).

² Occasionally ambiguous. Thus, *ekapatnītā* is the condition of having "the same wife"; but in R. v. 28. 13, *ekapatnītvam* is having "only one wife." But the context makes the meaning clear.

³ The expansion is rather wide on this side and varies between time-divisions (twelve years of fasting, sacrificing, etc.) and religious numbers, for example, the twelve syllables of the *pāda* of the *jagatī* verse, iii. 134. 19 (observe *navākṣarā bṛhatī*, ib. 16).

tem, 12, (30) 60, etc., is naturally selected, the decimal system is in ordinary use, both for the system of administration, xii. 87. 1 ff., and for the army, ib. 100. 31, etc. But it does not appear in any system of measures and only once is used of weights, though it should be added that the indications of values are so rare as to be of little importance (in iii. 134. 15, *aṣṭāu gaṇāḥ gaṭamānaḥ vahaṇti*; also *dravṇika*, ref. PW.).

COUNTING AND ADDITION.

Except in counting up money, *saṃpādayati*, and a poetical use of *yuj* and *yoga* (*navāi 'va yogo gaṇanāme 'ti gaṇvat*, of the nine digits in counting, iii. 134. 16; *taṃ mahūrtāṃ kṣaṇaṃ velāṃ divasaṃ ca yuyoja ha*, "she reckoned the time," ib. 296. 7), the usual word for count (counting is *gaṇanā*) is (*pra*)¹ *gaṇayati*, as in iii. 193. 28, *yatrā 'hāni na gaṇyante*, "where days are not counted;" *saṃgaṇanā nā 'sti*, "there's no counting," xiv. 73. 24; *gaṇayasva*, "count," iii. 72. 23; a word that passes into the sense of reckon, think, especially with *vi*, and regard, *na ca tān gaṇayāṃ āsuh*, "disregarded them," viii. 37. 10 (*gaṇaye* in R. vii. 16. 42 appears as *gaṇe*, *mānuṣāṃ na gaṇe*, "I don't regard men"). Often follows the object compared in the instrumental, *na gaṇayāmy etāṃs tṛṇenā 'pi*, "I do not care a straw for them," ii. 44. 34. Though *gaṇeya* is used, yet the corresponding adjective, calculable, is usually *parimeya* or *saṃkhyeya*, *saṃkhyā*, i. 74. 33; iii. 121. 11, etc.; i. 55. 2, *gakraśya yajñāḥ gaṭasaṃkhyā uktaḥ*; xiii. 107. 36, *saṃkhyā atigraṇā*, "incalculable number." The idea of addition is given both by simple juxtaposition, usually prefixing, of cardinal or even ordinal (above) numbers, whereby it is sometimes doubtful whether, as in *daśagaṭam*, the modification is by addition or by multiplication; and by *adhikam*, as in *ekā gaṭādhikā* (i. 115. 21 and 41, *ekādhikaḥ gaṭam pūrṇam*, *gaṭam pañcādhikam*, or prefixed); that of completeness, by *pūrṇa*, full, *sāgra*, all, and *api* and *pari*. Only the last requires a word.² The native scho-

¹ *tataḥ pragaṇayām āsuh kasya vāro 'dya*, "they calculated whose turn it was," i. 164. 14.

² For *pūrṇa*: "they say that ten hundreds are a full, *pūrṇa*, thousand," iii. 134. 17. For *sāgra*: *gaṭam sāgram*, "a whole hundred," xii. 112. 6; R. G. v. 7. 28; for *api*: "still be to thee even (full) ninety-nine sons, but abandon this one," *gaṭam ekonam apy astu putrāṇām, tyajāi 'nam ekam*, i. 115. 37.

liast gives to *pari* not the sense of completeness but of addition. Unfortunately he does not recognize the reading *pariviniṅat*, given above, but he renders *paricaturdaṣa* by fifteen at iii. 1. 11 and iii. 93. 28, and at ii. 3. 37 by “fourteen over” (more). On *pariṣoḍaṣa*, at iii. 78. 2, he says nothing. Completeness would seem to be the real meaning by analogy with *parisamvatsara*, for example in iii. 108. 13 ff., *sahasraparivatsarām . . . samvatsarasahasre tu gate dirge*.

Less common is the use of *uttara*. In i. 128. 18, *gatam ekottaran teṣām*, “a hundred of them with one more.” So in iii. 308. 1, *daṣottara* in the phrase *gukle daṣottare pakṣe*, “on the eleventh bright half-month” (after ten full months). This accords not only with the scholiast’s explanation but also with the usual allotment of ten (whole) months of pregnancy. Other examples of *uttara* as plus will be found correctly given in the Petersburg lexicon. Colloquial is *kim uttaram*, “what more?”; “not to have *uttaram*” is to be unable to reply to a remark. Another word for “more” is *ārdhram*, over, beyond, with ablative. An adjective with *paras* or *param* also does duty for “more”: *pāduraksān paraḥḡatām* “beyond a hundred guards,” vi. 95. 36; *paramśahasrā viprāḥ*, “over a thousand priests,” xii. 38. 24; as *para* itself is used, *ekaḥ cā ’pi gatāt paraḥ*, “one more than a hundred,” i. 115. 1; *samvatsara-parāḥ kṣapāḥ*, “more than a year (of) nights,” i. 221. 13 (viii. 90. 61; 78. 55, *paraḥḡata* and *paraṇḡata* have already been cited by Professor Holtzmann, *Zur Geschichte*, i. p. 161. Examples are not numerous). Nīlakaṇṭha follows an improbable tradition in attributing the meaning of “more” to *nis* in *nistrinṇa*, (a sword) “more than thirty” thumbs in length, *trinṇadāṅgulādhikāḥ*, iv. 42. 16, and elsewhere.

The word, *adhika* or *abhyadhika*, is used to convey a comparative notion, “more than,” *dirghebhyaḥ ca manusyebhyaḥ pramāṇād adhiko bhūvi*, “greater in size even than tall men,” xiii. 160. 15; which leads to the sense “superior to,” *tāghave sāṁstaveṣu sarveṣām abhyadhikāḥ*, i. 132. 15, and even to that of “more happy.” The ablative usually follows. Examples:

viii. 35. 4, *igvarād adhikāḥ*, (Brahman) “greater than Īva.”

vii. 74. 25, *yogāt tvatto ’dhiko ’rjunāḥ*, “superior to you through practice.”

viii. 32. 61, *Karmṇo hy abhyadhikāḥ Pārthāt*, the same.

viii. 83. 31, *abhyadhiko rasaḥ*, "a better taste."

iii. 92. 15, *ko nāmā 'bhyadhikas tataḥ*, "more blessed (superior, better off) than he."

So (*abhy*) *adhikam* is used as the comparative-maker of adjectives: *Soma Rohiṇyām abhyadhikam prītimān bhūtaḥ*, "Soma was more in love with Rohiṇī," xii. 343. 57; *sā 'dhikam gobhānāmā*, "she was more lovely," i. 221. 20. But *adhika* may mean "too great," as in the only defect of Arjuna: *piṇḍike 'syā 'dhike*, xiv. 87. 8 (his cheekbones were too prominent).¹

SUBTRACTION.

The farmer's crop which is *śaḍbhāgapariḥkṛta* is "cleared" of the royal tax, that is, the sixth part of it has been subtracted, xiii. 112. 19. The usual term to indicate that one number has been subtracted from another is *āna*, lacking, deficient, *pañcānaḥ gataḥ*, "a hundred less five," iii. 72. 11. The independent use of this word is rare: *āne dviyojane gataḥ*, "two incomplete leagues" (not quite two), ix. 5. 50. Nīlakaṇṭha recognizes the meaning of *nyūna*, the usual word for almost, in *avara*, which occurs in ii. 15. 22, *evam sarvān vaḥ cakre Jarāsandhaḥ gatāvarān*, "he has overcome almost all a hundred," after it has been said that the kings overcome were a hundred and one, and just before the more precise statement that they numbered eighty-six and that fourteen remained, *ṣeṣā rājāṅg caturdaśa*, gl. 18 and 25, to complete the tale of one hundred. As one and a hundred means only a large number, *nyūna*, "not quite," is supported by the context as the probable meaning of *avara*, and another passage also seems to show that this meaning, not recognized in the lexicon, which gives only "at least" with numbers, is possible. This is *na kaḥ cid aharat tatra sahasrāvaram arhanam*, "no one brought as tribute there less than a thousand," ii. 35. 11, literally "a tribute having a diminished thousand," so that *avara*, "less," forms the counterpart to *uttara*, "more." The other meaning, from the idea of "less," that of "at least," is, however, the usual one, as in *mantrīṇaḥ tryu-*

¹ For "a half more than all" we have "all and more by" in xiii. 125. 10 (extension of Manu iv. 85); *ardhenāi 'tāni sarvāṇi nṛpatīḥ kathiyate 'dhikaḥ*. The scholiast says *adhikaḥ* is in antithesis to a little, *kṣudra*, king (equal to all these by a half is a great king).

varāḥ, "at least three," xii. 83. 47. The "deficient" idea is common enough with nouns, for example, *guṇāvāra*, "deficient in qualities," and glides naturally into the combination with numbers. Another example of the rarer sense may, I think, be found in xii. 321. 158: *sa (rājā) tasyed daṣaḥbhāgena tatas trāṅgo daṣāvarāḥ*, where "at least ten" scarcely makes the required antithesis of not even ten; for the sense seems to be that a very energetic warlike king "should be satisfied with a tenth and any other with still less." Opposed, by the way, to *avara* in the usual sense is *parama*. As shown above, *para* means "more;" but *parama* means "at most," *sahasraparama*, "at most a thousand," and this "most" is used for "whole," *trivarsaparamoṣita*, of seeds kept to the highest point of three years, or, as we should say, three whole years, xiv. 91. 16.

The "remainder" is *ṣeṣam* or *ṣiṣṭam*, as in *pañcāṣṭatān ṣaṭ ca ṣeṣān dīnānān tava jīvitasya*, "the remainder of thy life is fifty-six days," xii. 51. 14; *ṣiṣṭam alpaṁ naḥ*, "our life's remnant is short;" *ṣeṣeṣv anyeṣu kāleṣu* "at other times, on remaining occasions," i. 122. 26; *ṣeṣe*, "as for the rest," *apeṣataḥ*, "wholly" (without remainder). The participle is more common than the noun, *varsāṇi trīṇi ṣiṣṭāni*, "three years remain," xv. 20. 32, and so often, especially with other participles, *hata-ṣiṣṭāḥ*, "those left from the killed," still alive, xii. 54. 5, etc. The verb commonly used is *hiyate*, "is less" (*avaṣiṣyate*, "remains," *avaṣiṣṭam*=*ṣiṣṭam*), opposed to *atiricyate* "is more;" *samābhavati*, "is equal" (equal in size is generally *samānītam*); for "equal" as quit, the same word, *ubhayaṁ tat samābhūtam*, "both sides are quit," xii. 139. 24; equal, of scales, *tulā me sarvabhūteṣu samā tiṣṭhati* (*samo* 'ham sarvabhūteṣu), xii. 263. 10. Compare xii. 176. 10:

*ākincanyam ca rājyam ca tulayā samatolayam
atyaricyata dāridryam rājyād apī guṇād dhikam,*

"I weighed in the scale poverty and kingship; poverty having more good qualities surpassed even kingship." The measure is given by *pramāṇa*, either of size (as usual) or of number, as in

¹ Just before, the *daṣavarga* is the group of imperial factors, but this does not seem to be referred to in this verse. The king, *sa*, is expressly *mahotsāha* and fond of military duties.

xiii. 107. 32, *lomnām pramāṇeṇa saman,*

sc. *ṛkṣacarmagatasya*, (he is exalted in the Brahman world) "equally (as to years) with the number of hairs" (of a hundred bearskins). "Less" as inferior, secondary, is *gāuṇa* (see the next paragraph).

MULTIPLICATION.

While the word for times in its literal sense is (*-varam*) *kṛtvāḥ*, *pañcakṛtvāḥ tvayo 'ktaḥ*, i. 197. 49; *triṣaptakṛtvāḥ*, passim, the verb for times, multiply, is *guṇay*, whence *guṇita*, multiplied by (the number preceding), literally "qualified." In later texts, *guṇikṛta* is used in just the same way, but in the epic this word is, I think, used only in *dviguṇikṛtavikramāḥ* (*Great Epic*, p. 419). In the same way, *guṇibhūta* is used in later texts for *guṇita*, multiplied, but in the epic it means inferior (compare *gāuṇa*), *guṇibhūtā guṇāḥ sarve tiṣṭhanti hi parākrāme*, "all qualities are qualified in (inferior to) valor," ii. 16. 11. But usually no verb is needed to express multiplication, which as a formal arithmetical process the epic has as little occasion to make use of as subtraction. But the informal multiplication of ordinary language, double, thrice, a hundred-fold, without formal sums, is as common as in any other language, and the times thus indicated is regularly expressed either by simple juxtaposition of numbers, whereby, as has already been said, one is uncertain whether addition or multiplication is intended, as in *pañcagatam*, one hundred and five or five hundred, iv. 43. 6 (only the syntax sometimes shows decidedly, *narāṇām pañcapañcāśad eṣā pattir vidhīyate*, "a *patti* is reckoned as five [and] fifty men," v. 155. 28); or by the noun *guṇa*, as in *ṣaṭcīrā dviguṇagotraḥ*, "having six heads and double as many ears," iii. 225. 17; *ekāikam triguṇāḥ śarāḥ*, "each one (he wounded) with three times the number of arrows" (each had used), viii. 48. 70; *tataḥ ṣaṭtiguṇe kāle*, "in a time sixty times longer than that," xiii. 28. 10. In this last case the same idea is expressed in the following stanzas without *guṇa*, but perhaps only because this word has been used several times already. Thus in 11, *tatas tu dvigate kāle labhate kāṇḍapṛṣṭhatām*, "in a time two hundred (times longer) than that." As an adverb: *tataḥ śataguṇam duḥkham idam mām asprṣat bhygam*, "this grief has afflicted me sorely, a hundred times worse than that,"

xi. 27. 33. In this use *gaṇa* has ousted almost completely the old *vṛt* of *trivṛt*, which survives only in a few hereditary turns. A very uncommon equivalent is *saṅkhyā*, as in xv. 3. 63, *yasya nāgasahasreṇa śatasāṅkhyeṇa vāi balam*, "whose strength is comparable with a thousand elephants' a hundred times over" (numbered a hundred). Between the qualitative and temporal meaning, where the word is equivalent to *kṛtvāḥ*, "times," lies the application found in ii. 24. 6, where, in a wrestling-match, one is whirled about a hundred times, *śatagaṇam*, a description, by the way, copied in many details by the writer of iv. 13, where ḡl. 36, for example, has the same expression. Here *dvigūṇam* occurs in a physical sense also, *rakṣo dvigūṇam cakre*, "he doubled that demon up," i. 163. 27 and elsewhere.

A combination of adding and multiplying, as in "more than so many times that" is expressed by the *gaṇatā* numeral (to use this word thus) plus the word for "more." Thus, "he gave them wealth more than five times what they had asked him for" is *prāḍāc ca draviṇam . . . yatho 'ktavantas te tasmiṃś tatubh pañcagaṇād bhikṣam*, ii. 12. 15. Without "more": *yatho 'pudīṣṭam acāryāḥ kāryaḥ pañcagaṇo rathah*, "let my chariot be furnished with five times (as many arrows) as the teachers enjoin," vii. 112. 48; *yathā vedā dvigūṇam vetsy*, "you know twice as much as he knows," viii. 32. 62. Here partial correlation takes the place of the comparative (ablative) idea. The more elaborate construction is also common, as in xiii. 100. 7: *yathā ca gṛhṇīyas toṣaḥ . . . tathā śatagaṇā prītir devatānām*, "a hundredfold so great is the joy of the divinities as is the satisfaction of the householder."

Sometimes, when the completion of the clause is easily understood, it is left out entirely, and we find (of the *ahina* sacrifice) *ḍakṣiṇām trigūṇām kuru*, *trītvam vrajatu*, "make the fee threefold, let it reach treble," xiv. 88. 14, that is, make it three times more (than ordinary).

Some curiously awkward methods of multiplying are found. In i. 55. 2, after saying that Indra's sacrifices are a hundred in

¹ So in using the ablative it is not necessary, any more than in Greek, to be precise in the application of the case following "times that;" *agvamedhād daśagaṇam phalam āhuḥ*, "they say the fruit is ten-fold (that of) a horse-sacrifice," iii. 82. 27.

number, *saṅkhyā*, the poet adds: "But your sacrifice here, O Bhārata, is *tathā param tulyasaṅkhyāṃ gatāṃ vāi*," which the scholiast explains as equal to an *ayuta* of Śakra's (100×100), but perhaps only another hundred is intended. In xiv. 65. 18, however, there is no escaping the awkwardness with which one number is multiplied into another of a separate category. What the poet wants to say is sixty thousand camels and twice as many hundred horses, which he expresses by "twice as many horses hundreds," *ṣaṣṭir uśtrasahasrāṇi gatāni dviguṇā hayāḥ*. This is followed by *tāvad eva* with the plural noun, *gataṇi rathāḥ cāi 'va tāvad eva kareṇavaḥ*, that is, "just as much" instead of "as many." So in iii. 281. 10-12, "fourteen crores of Piṣācas, twice as much of Rakṣasas, *dvistāvat* (with genitive and with *koṭyaḥ* supplied), and three times as many Yakṣas," *tataḥ triguṇā yakṣāḥ*. Similarly, *yāvat tasya bhavet puṣṭis tejo* (etc.), *Kṛṣṇe tatriguṇam*, "however much may be Arjuna's prosperity, glory, etc., Kṛṣṇa's is three times that," xiii. 148. 34. Ordinarily the numeral adjectives agree with the nouns compared, as in iii. 122. 27, *yāvantaḥ pāvakaḥ proktāḥ somās tāvanta eva tu*; vii. 201, 59, *ṣaṣṭiṃ varṣasahasrāṇi tāvanti eva gatāni ca*. A connecting link is furnished by *tāvat* as part of a compound *yāvanti tasyā romāṇi tāvadynugasahasrāṇi*, iii. 200. 71, etc.

Another case of comparing numerically different sorts of things is found in vii. 65. 9, but here the number is the same: *vārṣāḥ ca yūpā yāvantaḥ . . . te tathāi 'va punaḥ cā 'nye tāvantaḥ kāñcanā 'bhavan*.

Distribution is expressed by repetition, with or without an adverb: *navame navame 'hanī . . . daṣāhe vāi gate gate*, "each ninth day . . . as often as the tenth day passed," xiii. 107. 39, 43; *trayāṇām nīthumaiṃ sarvam ekāikasya prthak prthak*, "each one separately has two of the three," xiv. 18. 27. This relieves one of the necessity of distinguishing between each and all; for example, in xiv. 90. 34, *kuḍavaiṃ kuḍavaiṃ sarve vya-bhajanta*, "they all divided (so that each obtained) one *kuḍava*," iii. 124. 21, *catasraḥ cā 'yatū daṁstrā yojanānāṃ gatāni gatam*, "four fangs extending a hundred leagues each." But *ekāika* is usually expressed, as above and in ii. 52. 21, *dat-tvāi 'kāiko daḡaḡatān kuñjarān*, "each giving ten hundred elephants." The noun used alone may be singular, *jātaṃ jātaṃ*

ca sū putranī kṣipaty ambhasi, "she throws in the water (each) son when born," or plural, *jātān jātān prakṣipā'smān (putrān)*, i. 98. 13 and 99. 43. The verb may agree with the singular: *ekāikas te tadā pāçāḥ kramagaḥ parimokṣyate*, xii. 227. 116, perhaps only metrical, as in the same chapter *gocīmī* for *gocāmī*, çl. 88. The late derivative *ekāikaggena* is found in xii. 326. 38, *tad antaḥpurakānanam sraṇyām darçayām āsur ekāika-ggena* (here the grove opens out from the third *kakṣyā* of the palace).

With adjectives the cardinal stem prefixed multiplies the adjective, *caturbhadrataras' trayā*, "four times as happy (compared) with you," in vii. 55. 49. and xii. 29. 30, two scenes where all the "kings that died" are spoken of at length in two different but related accounts, of some value for the history of the epic.² In vii. 70. 25, the phrase is intensified: *caturbhadratarās trayā bhadraçatādihikāḥ*.

Finally, there is the multiplication expressed by *dhā* as an ending, which gives not only the times of division and consequent multiplication of parts, and time literally, *ekadhā*, "at one time," but also the multiple times in numbers, *çaptadhā*, "seven times (over)." *Çapta tridhā* is thus equivalent to *çapta triguṇāni*. In xii. 223. 22, the Gandharvas dance *ṣaṭ sahasrāṇi*

¹ The instrumental is not so very rare. Compare *eko hi bahubhiḥ greyān*, "one (sage) better than many" (fools), iii. 99. 22; *ko nu svantataro mayā*, ix. 64. 21; *sā 'çā kṛçatari mayā*, xii. 128. 14; *durmarṣaṇataras trayā*, xii. 227. 81. The ablative is used after a positive, *mama balam bhīmaṁ vāyor api*, "my strength is greater than the wind," xii. 155. 6. One case expresses comparison, the other the distance from, *sukhāt sukhatarām prāptaḥ*, "coming from joy to more joy," xiii. 119. 11. The ablative is found with only an implied comparison, *rājyād devatvam icchanti*, "they wish godship from kingship," xii. 180. 20, leading to preference (*vṛṇe* and abl.; also *greyān dāho na bhakṣaṇam*, i. 230. 21, etc.; Holtzmann, § 292 b). Noticeable is the double ablative showing clearly the construction's origin, *svavīryād rājavīryāc ca sva, vīryam balavattaram*, "from (of) his own and a king's, his own power is stronger," xii. 165. 18. Holtzmann, at § 281, gives a few more examples of the instrumental. To the gen. comparat., my *Great Epic*, p. 473, add *maraṇaṁ çobhanaṁ (=varam) tasya*, i. 79. 13.

² The introduction of the former is in the latter put at the end of the account and the latter omits the second Rāma, which completes the list of sixteen in Droṇa. Bharata, too, changes places, being the antepe-nultimate king in Çānti but the fifth in Droṇa, which has several later features.

saptadhā, literally in seven groups of six thousands, or seven times six thousand, that is, a not unusual amplification by a sacred multiple of an old group, for the Atharva Veda, xi. 5. 2, gives the same conventional *ṣaṭsahasrāḥ*, though here three hundred thirty-three are added. The epic itself gives to the Gandharvas another conventional number at iii. 139. 6, where they are eighty-eight thousand in number and the Yakṣas are four times as many, *aṣṭāṣṭisahasrāṇi Gandharvāḥ . . . Yakṣāḥ cāi 'vā caturguṇāḥ*. Another example is furnished by the list of Munis in seven groups of seven each, at xiii. 151. 42: *ity etc munayo divyā ekāikaḥ sapta saptadhā*, etc., "seven, one by one, reckoned sevenfold" (a different account in xiii. 166. 37 ff.). Compare also *saptadhā sapta saptasū ; janna saptadhā*, xiv. 20. 23 and 27. The number of times a multiplied god appears is often expressed thus, as when Rudra, kind and terrible, one-eyed and three-eyed, appears as *ekadhā, dvīdhā, bahudhā, ṣatadhā, sahasradhā, gaṭasahasradhā*, xiii. 161. 43. One of his forms, by the way, is *dhūmra*, which gives, it is said, his name of *dhūrjati(n)*, a title found only here, xiii. 162. 9, and vii. 202. 129, two passages of the same period and content, a late epic "Çatarudriya."

DIVISION.

Halving is expressed by *dvāidhībhū* or *-kar* or *dvīdhākar*; other divisions by *trīdhā* (*trāidham*), *caturdhā*, and so on, with *kar* or *vibhaj*, e. g., *daṣadhā kāryaṇi geṣam*, "the remainder is to be divided tenfold;" *dvīdhā kṛtā jihvāḥ*, ("therefore the snakes') tongues were cloven," i. 34. 23 (*dvījihvāḥ ca kṛtāḥ*, 24); *gavāṇi dvāidhīkṛtāḥ khurāḥ*, *khurāṇi dvīdhā 'karot*, "Rudra clove the hoofs of his bull and other cattle," viii. 34. 105. The half, *ardha*, is used no more with nouns than with participles: *ardhāsanam labdhavān*, "he got half of Indra's throne," iii. 126. 38; *ardhacyutāsanāḥ*, "half flung from their seat," vii. 196. 15; also of course with other numbers. With words of time, *ardha* follows or precedes in *māsārtha*, *ardhamāsa*, and means either the middle (of day or night, *ardhadivasa*, *-rātra*) or half: *ardharātrasamaye*, "at midnight" (so passim); *yady ardhadivasaṇi yudhyate*, "if he fights half a day," vii. 190. 46 (*ardhadivasaṇi gatvā*, "going half a day," R. vii. 46. 24).

Besides *ardhamāsa*, “a month and a half” may of course be expressed in full. Thus, where *mā* is used exactly as in *mā cīram*, in iv. 21. 17, *mā dīrgham kṣama kālān tram māsam ardhām ca sammataṁ*, “have patience for a short time, a month and a half” (= *sārdha*).

The use of *ardha* with other numbers shows that, as in the case of two numbers joined and indicating that the former influences the latter without specifying how (e. g. *daśaśata*=110 or 1000), the prefixed *ardha* modifies the word with which it is connected, but does not specify whether by addition or subtraction or multiplication. So *ardhaśatam* is one hundred modified by one half, just as *ekaśatam* is one hundred modified by one, and the hearer is left to determine whether this means half a hundred or one hundred plus a half (hundred). With other fractions, however, there is understood a conventional modification of subtraction. Thus “half-fourth” is always (as adjective) three and a half, that is four as modified by a half. For example, up to two and a half *koss* is “to the half-third *koss*,” i. e. to the third *koss* as modified by a half, *kroçāḍ ardhatrītyāt*.¹

When not defined, *bhāga* and *aṁṣa*, “part,” mean a quarter, *caturbhāga*=*pāda*, a (fourth) part (of a quadruped). For three quarters is used either “three quarter parts” or “three parts.” The usual meaning of “three-part,” *tribhāga*, is one third, but it occurs also in the later epic (as in still later literature) in the meaning of three quarters. For other divisions, the part is made explicit, *aṣṭibhāga*, $\frac{1}{8}$, etc. Only *kalā* is almost always $\frac{1}{16}$.

iii. 190. 10, (*krte catuspād dharmaḥ*) *adharmapādavidhās tu tribhīr aṁcūḥ pratiṣṭhitaḥ*;

ib. 11 and 12, *tribhīr aṁcūḥ, caturthāṅgena*.

In the pseudo-epic, the same situation is expressed by *pādonodharmaḥ* (in Tretā), *dvīpāda*, *pāda* (*adhare yuge*), to which is added the unique idea that even this quarter in Kali is so diminished as to leave one sixty-fourth, *bhavit kālaviṣeṣeṇa kalā dharmasya ṣoḍaṣṭ*, xii. 268. 33–34 (*caturthāṅga* also xii. 283. 51).

¹ The passage is cited in full on p. 147, below. I fail to understand Speyer's explanation, *S. Syntax*, § 301, that *ardhatrītya* in such a case means “having the third being [but] half.”

ii. 68. 78, *ardham harati vāi gresṭhaḥ pādo bhavati kartṛṣu.*

iv. 52. 17, *balacaturbhāga*, "one fourth the army."

xii. 24. 12, *ādāya baliśaḍbhāgaṁ yo rāstram nā 'bhirakṣati
pratigṛhṇāti tatpāpam caturāṅgena bhūmipah.*

ii. 5. 70,

*kaccid āyasya cā 'rdhena caturbhāgena vā punaḥ
pādabhāgāis tribhīr vā 'pi vyayaḥ saṁgrādhyate tava,*
"are your expenses covered by a half or a quarter, or
at any rate by three quarters of your income?"

vii. 186. 1,

tribhāgamātrageṣāyām rātryām yuddham avartata,
"the battle was renewed when one third the night was
left."

vii. 191. 9,

tasya cā 'hnas tribhāgena kṣayam jagmuḥ pratatrinah,
"in the course of one third of that day."

The "third" may of course be expressed, as in xii. 285. 23,
labheta bhāgaṁ . . . ardham tathā bhāgam atho tṛtīyam. In xiii.
168. 28, *tribhāgaṣa* means "having three quarters left."

In i. 96. 21 (as *ardhārdha* still later means a fourth) one
eighth is expressed by "half a fourth," *turīyārdham pradās-
yāmo vīryasyāi 'kāikago vayam*, "we shall severally give a half
of the fourth of our power," said by the eight Vasus. It is
rather remarkable that Kṛṣṇa is described in xii. 281. 62 as this
fraction of God: *mūlasthāyī mahādevaḥ . . . tatsthaḥ sṛjati tām
bhūvān . . . turīyārdhena tasya 'mam viddhi Keçavam.*

When quarters are mentioned, as when Çrī is quartered,
caturdhā vibhaktā, and the quarters are enumerated, the first is
pāda alone, the others are *dvitīya*, *tṛtīya*, *caturtha*, *pādas*, xiii.
225. 19 ff.

According to the commentator, *triḡuṇa*, threefold, like *tri-
bhāga*, also means one third in v. 55. 66, where, after eleven
armies have been contrasted with the seven which in comparison
are called *nyūnāḥ*, "deficient," the deficiency is declared to be
great enough to warrant a battle, for

*balam triḡuṇato hīnam yodhyam prāha Bṛhaspatiḥ
parebhyas triḡuṇā ce 'yam mama rājann anīkinī,*

whereto N. remarks that the adverb means (deficient) by a
third, *tryaṅgena*, and the adjective "a third more." And cer-

tainly if number is implied at all, eleven are not thrice seven but may be loosely reckoned as a group of three fours, deducting one of which would leave seven, so the "deficient" host would be "a third less" and the host of eleven would be "a third more" (measured by itself). There seems, however, to be a conscious play on words here, for in the next stanza the "deficiency," *nyūnatā*, is explained as *gṛahīṇam* or a moral lack.

In vituperation, which exercises the epic poets a good deal, it is customary to say that an opponent is not worth a half, a quarter, or a sixteenth of the other man. In praise, on the other hand, one says that the object of praise is worth one and a half of the other. One sixteenth, expressed either as "sixteenth particle" or simply a particle or a particle-part, denotes the smallest part usually taken into account. The word gives the last imperishable fraction of the moon visible before it disappears (xii. 305. 4, so the pure soul, *kalā sūkṣmā*, ib. 6 and 335. 40). The adjective full is sometimes added to the part. Twice this fraction is exceeded, once by saying that one eighteenth will not express the relation of inferiority, once by descending to one hundredth part to express contempt. Apart from vituperation, the "sixteenth particle" is employed in a few old phrases. It is found also in Manu and in Buddhistic literature. Examples:

- i. 100. 68, *agnihotrāṁ trayī vidyā santānam api cā 'kṣayam sarvāṇy etāny apatyasya kalāṁ nā 'rhaṁti śoḍaṣṭim.*
- ii. 41. 27, *iṣṭāṁ duttam adhātūṁ ca yajñāḥ ca bakudakṣiṇāḥ sarvam etad apatyasya kalāṁ nā 'rhaṁti śoḍaṣṭim.*
- iii. 91. 23, *na sa Pārthasya saṁgrāme kalām arhati śoḍaṣṭim.*

So iii. 174. 3; 254. 27; 257. 4 (your sacrifice is inferior); vii. 36. 7 (the army); vii. 111. 30¹. With *pūrṇa*: iv. 39. 14, *na cā 'rjunaḥ kalā pūrṇā² mama*, "Arjuna is not (as much as) one whole (sixteenth) part of me;" v. 49. 34, *nā 'yam kalā 'pi sam-pūrṇā Pāṇḍavānām*, "he is not even one whole (sixteenth) particle of the Pandus." So in vii. 197. 17,

yah kalāṁ śoḍaṣṭim pūrṇām Dhananijaya na te 'rhati.

¹ In the next stanza, *nā 'lam Pārthasya saṁyuge* (rare genitive), "not equal to."

² So I read (compare the next citation). PW. accepts the text, *kalā-pūrṇo*, s. v.

In viii. 15. 28 it is said, "all weapons are not worth a sixteenth part of him." As an equivalent of $\frac{1}{16}$, *prastha* ($\frac{1}{16}$ of a measure) is used where it is appropriate, xiv. 90. 7, "this sacrifice is not equal to a *prastha* of grain of (given by) a man living by glean-ing corn," *saktuprasthena na tulyaḥ*.

In religious writing, besides the phrase above is found a (Buddhistic) comparison, repeated, xii. 174. 46; 177. 51; 277. 6:

*yac ca kāmāsukhaṁ loke yac ca diryam mahat sukhaṁ
tṛṣṇāksayasukhasyāi 'te nā 'rhatāḥ goducīn kalām.*

This stanza is in fact attributed to the same Buddhistic king who sings of his happiness in having nothing, and it is associated with that famous stanza in the last two passages. In the same way is used *kalā* alone:

*agvamedhasahasrasya vājapeyagatasya ca
yogasya kalayā tāta na tulyaṁ vidyate phalam,
xii. 324. 9 (a Yoga improvement of Spruch 791).*

I have found the "sixteenth" phrase but once in a triṣṭubh stanza, with a slight alteration in form and sense (truth sur-passes all possessions):

iii. 34. 22, *rājyaṁ ca putrāḥ ca yaço dhanam ca
sarvaṁ na satyasya kalām upāti.*

A curious account of the distribution of the world's wealth in vi. 6. 23 asserts that Kubera has one quarter of the valuables of Meru, out of which he dispenses one particle-part to mankind, equivalent to one sixty-fourth of all, as in the case of Kali's virtue (above):

*tasmāt kuberō bhagavaṁś caturtham bhāgaṁ agnute
tataḥ kalāṁścaṁ vittasya manuṣyebhyaḥ prayacchati.*

Examples of other fractions in scorn: i. 201. 13, (*yuddhe*) *Rādheyasya na pādabhāk*, "not worth a quarter of him;" iii. 253. 9, *na cā 'pi pādabhāk Kūrṇaḥ Pāṇḍavānām (dhanavrede)*; vii. 76. 1, *teṣāṁ vīryam mamā 'rthena na tulyam*, "their power is not equal to half of me;" xii. 155. 6, *kalām aṣṭādaśīm¹ prāṇāir na me prāpnoti mārutaḥ*; x. 12. 17, *na samā mama vīryasya catāṁgenā 'pi pīṇḍitāḥ*, "they all together are not equal to one hundredth part of my power."

¹ This $\frac{1}{8}$ for the older $\frac{1}{16}$ is a pseudo-epic alteration of the old phrase. It occurs in the Wind and Çālmali fable.

A back-handed boast of Karna, which, I think, the poet intentionally makes incoherent, is that of viii. 43. 9, *pte Çalya-sahasreṇa vijayeyam aham parān*, "I could conquer the enemy without (the help of) a thousand Çalyas," i. e., "I am equal to a thousand Çalyas," or rather "without Ç., a thousand times over." Çalya mockingly replies that Karna talks nonsense; whereupon Karna returns "more and double abuse," *parusaṇi driguṇam bhūyaḥ*.

On the other hand, in lauding a friend, one and a half is the norm of comparison, as in the following examples:

vii. 72. 34, *mayā 'dhyardhaguṇaḥ (putraḥ)*, "my son is equal to me one and a half times over" (sometimes simply "equal to me").

xi. 20. 1, *adhyardhaguṇam āhur yam bale . . . pitrā tvayā ca*, "who in power they say is equal to one and a half times his father and you" (Kṛṣṇa!). But the comparison, too, is once used scornfully:

ix. 33. 19, *adhyardhena guṇene 'yam gadā gurutarī mama na tathā Dhārtarāṣṭrasya*, "this club of mine is one and a half times heavier than that of D."

Apart from this belligerent use, one and a half is used of measurement of numbers, i. 1. 103, *adhyardhagata*, "having one hundred and fifty;" of land, viii. 88. 10, *adhyardhamātre dhanuṣān sahasre*, "on (land) measuring one and a half thousand bow-lengths;" v. 8. 2, *tasya senānivego 'bhūd adhyardham iva yojanam*, "his camp was about a league and a half."

In reckoning interest, *pādikam gatam* is twenty-five per cent., but the verse in which this occurs, ii. 5. 78, *pādikam ca catam vṛddhyā dadāsy ṛṇam anugraham*, has a varied reading, *praty ekam ca gatam* (metrical for *prati gatam ca ekam*).¹

As observed above, the current words for fraction are *pāda*, *bhāga*, and *aṅga*. In xiii. 26. 97, appears in this sense *ekadeśa*, a single part of a whole: *udāhṛtaḥ sarvathā te guṇānām mayāi 'kadeśaḥ . . . śaktir na me . . . guṇān sarvān parimāṭum*, "a single part of (Ganges') virtues I have told thee, I cannot count them all."

¹ The later epic, by the way, has two coins not previously recognized, besides the Roman denarius (implied), namely, the *kākinī* and *aṣṭāpa-dapada* (a gold *kārṣāpaṇa*), xii. 294. 16; 299. 40.

DIMENSIONS, TERMS, VALUES, SYNTACTICAL CONSTRUCTION.

The usual dimension, *parimāṇa*, mentioned in the epic is length, and with few exceptions distance (length) or height is the *pramāṇa*, a general word for size and extent. Certain measurements are made in the case of the few small things measured, but short distances are loosely cast in such forms as "near by," "not far," "within sight," or "within hearing," and indefinite smallness of extent in the same natural manner is described as "not an atom," "nor a bit," etc.

Distance: *teṣāṃ saṃśṛavāṇe*, "within hearing of them," xv. 18. 21 (ib. 20, *avidūrataḥ*, "not far off," like *saṃśṛutaḥ*, "near," with genitive; also with ablative, *nā 'tidūreṇa naya-rāṇ vanād asmād dhi lakṣaye*, i. 151. 44; *avidūre vanāt*, 152. 1; *na dūraṇ vanāt*, 154. 35; *abhyāṣe*, 156. 10, "in the neighborhood"); *āgramam prati, utsasarjya garbham*, i. 8. 7, "near the asylum"; also *antikam* and *antike*, according to the verb. In the case of *sakāṣa*, "with(in) sight," proximity, the original sense in many cases has well-nigh disappeared, *mātuh sakāṣāt taṃ śāpaṃ śṛtvā*, "hearing of the curse on the part of his mother," i. 37. 1.

The Rāmāyaṇa has another, more modern, phrase to indicate proximity, namely *mūla*, as in *aham gamiṣyāmi Yamasya mūlam*, v. 28. 17; *mama mūlam*, ii. 64. 49, which belongs rather to Purāṇic than to epic diction.

Extent: *na tasyāḥ sūkṣmam api*, "no (superficial) atom of her," i. 211. 16; *na tasya kāye antaram*, "no space on his body," iii. 21. 7; *hayanāṁ nā 'ntaram*, "no interval between the horses," iii. 172. 6; *chidraṁ na rathayoḥ*, "no chink between the two chariots," i. 226. 3. Indeterminate size is given by compounds, much as in English, *gajā acalasaṁkūṣāḥ*, "mountain-size elephants," xv. 23. 9, etc.

The verb extend, *āyam*, is used of extending a circle, synonymous with *utsarj*, *maṇḍalam utsṛjya*, v. 195. 15. The circumference is *pariṇāha*, the diameter, *viśkambha*. To express the idea of equal distance from a center, the term usually employed is *samanta*, "on every side," in adverbial form, *vedī samantāt pañcayojanā*, "five leagues on every side," iii. 129. 22. Generally, the geometrical figures implied by battle-arrays, called *vyūhas*, are described in figurative language, as a bird, a

needle, a dolphin, and the troops are stationed on the beak, tail, and wings. Thus *karṇa*, ear, becomes "corner" in vi. 60. 10, *caturcaturevyālasahasrakarṇaḥ*, "(an array) with four thousand elephants on each corner" (N. *karṇeṣu vidigbhāgeṣu*). But there is a peculiarity here in that no figure has been mentioned, and according to the account this array should be like a former one of crescent shape with two horns, *gr̥ṇge*, but, not to speak of the plural, we cannot take this statement too literally, and I do not know that *karṇa* is even cornu.

A *gr̥ṇgātaka*, named from a triangular nut which has "horns," is used to describe one of these *vyāhas* in vi. 87. 17, and may be a triangle, though here also the scholiast gives the usual epic meaning "shaped like a four-road place," just as at iv. 68. 25, *catuspatha*, etc. A triangle is *trikoṇa*, *τρίγωνος*, (*triṇona*), of the *garuḍa*, late, as explained in my *Great Epic*, p. 372. A city square is a "four place," *caturara*, xii. 69. 52, squares and markets being mentioned together in descriptions of cities. In xii. 73. 21, in antithesis to the whole, *kṛtsna*, city, this word may mean as in English a town-quarter; but in xii. 86. 8, *caturāpanagobhita* is simply "beautified by squares and markets." The "four" of a square is used also to give the idea of a four-square house, *caturḥḥāla*, and *anta*, boundary, is also used to imply a square, as in *daṣakiskusahasrāntā*, of a hall, "ten thousand cubits square," a meaning made clear by a parallel passage, where *samantāt*, "on all sides," is expressly added, ii. 1. 21; 3. 23, and no circle can be intended. Earth, *catur-antā*, "has four boundaries," that is, it is bounded by the "four seas." In xiv. 64. 10, a camp is *ṣaṭpadu* or *ṣaṭpatha* (and *navasankhyāna* or *samsthāna*), with three streets running north and south and three east and west, according to the scholiast; but in xv. 5. 16 he explains *ṣaṭpadam puram* as having six (traversable) places within the seven walls (up to the inner city), which is not a likely meaning, since the word is followed by *sarvatodiḥam*, "in all directions." Octagonal is *aṣṭā-gri* and other numerals are used with the same word, but only of edges, eight-edged posts and clubs.

Land is measured by bow-lengths (above), and by cow-hides, *api gocarmamātrena bhūmidānena pūyate*, "purified by giving even a cow-hide measure of land," xiii. 62. 19; and the length of a cord is measured in the same way, *na tām vadhrī pariṇahe*

gatacarmā, "a cord of a hundred hides could not encircle it," i. 30. 23. A "span of land" and "as much land as a needle's point could cover" are contemptuous terms.

From these general methods of measurement I turn to the more exact specifications found in the epic, arranging them on an ascending scale of comparison, from the "smallest finger" to the indefinite *yojana*, which is best rendered league, because its length varies like that of a league, while it approximates most closely to the three-mile league, though it ranges from that extent to about ten miles, according to later authorities; but nothing in the epic determines its length.

Finger-measurement: A thumb-joint serves as the measure of a small bit in general, *aṅguṣṭhaparvamātrā garbhāḥ*, i. 115. 20, and "thumbkin" spirits are perhaps conceived as being of thumb-size in relation to breadth as well as height. God himself, as a spirit, is measured by the size of a thumb-joint, *hrdayam sarvabhūtānām parvaṇā 'ṅguṣṭhamātrakāḥ*, xii. 313. 15; as all spirits are described as *aṅguṣṭhamātra*, thumb-size.¹ All shortest measured distances are calculated by this norm, usually by twos and fours, the application showing, however, that "two thumbs" and "four thumbs" refer to thumb-breadths. Thus there is a stereotyped battle-phrase, *na tasyā 'sīd anirbhinnam gātre dvyāṅgulum antaram*, "there was not an unwounded space of two thumbs on his limb," vi. 119. 86; 175. 54; iv. 55. 5 (v. l.); xii. 77. 27. The same phrase is found in R. vi. 45. 20, with the verb of the Virāṭa passage but with only one "thumb": *na hy aviddhanī tayoṛ gātre babhūvā 'ṅgulum antaram*, perhaps to be corrected as in Mbh. Earth is flung up "four thumbs," *caturaṅgulum*, by a chariot, viii. 90. 106. In a late scene, Yudhiṣṭhira's chariot floats four thumbs from the earth, *pṛthivyāḥ caturaṅgulum ucchvītaḥ*, vii. 190. 56.

The "littlest finger" serves as a comparison in the description of xii. 127. 7-8 (Tanum):

*anyāir narāir mahābāho vapuṣā 'ṣṭaguṇānvitam . . .
garītram api rājendra tasya kāṇiṣṭhikāsaman,*

"eight times in shape compared with other men (i. e. eight times as tall),² the body being (slender) as the littlest finger";

¹ References in my *Great Epic*, p. 32.

² A man's height is often given by saying how many cubits he has (as below). For tall and short are used *prāñcu* and *hrasva*, respectively,

where the poet has to change the regular form of the word *kan-iṣṭhikā* on account of the meter. I do not know whether in i. 52. 7, snakes that are the size of a *gokarṇa*, in antithesis to those that are leagues long, *gokarṇasya pramāṇataḥ*, *kroṣaḥ* *yajana-mātrāḥ*, are imagined to be the length of a *gokarṇa*-arrow or of a thumb-and-finger-span, a late meaning of the word. When subsequently re-described, they are *yajanaḥ* *yāmanavistara* (also a Rāmāyaṇa phrase) *deḥyajanasamāyatāḥ*, i. 57. 23, that is, measured by leagues only.

Hand and span: The triangular altar referred to above is described as "of eighteen hands," *aṣṭādaśakarātmaḥ*, xiv. 88. 32. The hand, however, is usually reckoned as a two-span cubit and not as a hand-length. Probably the "hand-tip" gives a double-span, for in the description of a slender woman it is said that her waist measures "a hand-tip," *karāgrasammitam madhyam*, iv. 13. 22. So in xi. 18. 5, *anavadyāṅgī kara-sammitamadhyamā*, "of irreproachable form, measuring a 'hand' about the waist." This measurement shows that the *kara* is equivalent to the *hasta*, a synonymous term, and equal to about a cubit (eighteen inches nominally, but perhaps only about sixteen), "eighteen inches round the waist" being (as I am informed) the boast of slender maids to-day, and Hindu women being petite. Double this length, two *hastas*, is given in Hindu tables as the circumference of a man's body, about the average thirty-four to thirty-six-inch waist.

The span, *prādeṣa*, is used of the measure of the breast about the spirit: *prādeṣamātre hydi niḥśṛtaḥ yat*, "what is made manifest in the span-measured breast," xii. 246. 28, that is, in the vital circle, measured as twelve thumbs in extent from the center; a late view if this reading be accepted.¹ Elsewhere the *prādeṣa* is mentioned a few times in the epic, but never in such a way as to betray what is meant. It measures, for example, the difference in height between the Pāṇḍus and other men, and

jajñe ṣālaguruḥ prāṇcur mahinnā prathitāḥ prabhuh, ix. 51. 34; the fever born of Īva's sweat is a *hrasvo 'timātram* ("excessively short") devil, xii. 284. 40.

¹ Reading *prādeṣamātram* we should have a reflex of Chānd. v. 18. 1; Māitri, vi. 38. The Āditya Purāṇa, cited by Colebrooke, *Essays*, vol. i. p. 539, says that Vyāsa makes the *prādeṣa* only one thumb-breadth, and not ten or twelve, as taught by others.

between Bhīṣma and Arjuna, for "Bhīṣma in size was more by a span than Arjuna," *pramāṇato Bhīṣmasenaḥ prādegeṇā 'dhiko 'rjunāt*, v. 51. 19, and (the same expression except for the instrumental case) in v. 169. 8, the Paṇḍus are a span taller than all others, *prādegeṇā 'dhikāḥ pumbhīr anyāis te ca pramāṇataḥ*.

Another word for span is *vitastī*, whence the arrows "called span-long," *vāitastikā nāma*, used only by special warriors at short distances in the descriptions of the late seventh book and nowhere else till they are met with again in the Harivaṅṣa and in the later Rāmāyaṇa. Thus in vii. 191. 42 and in R. vi. 49. 49 of the Gorresio edition, but not in the Bombay text. This is one of the many little indications that show how close Droṇa stands to the latest additions made to the epic. On the other hand, it helps to a terminus ad quem to find that *hasta* is never used for a measure in the epic, though common in the Purāṇas, and reckoned as two *vitastis* or twenty-four thumb-breadths.

Cubits: The cubits mentioned are *kiṣku*, in vii. 134. 10, "a club of four cubits," and *aratnī*, in i. 167. 25, "a bow (of Droṇa) of six cubits" (*catuṣkiṣku* and *ṣaḍaratnīdhanuḥ*, respectively, as possessive and determinative compounds). Post-epical authorities (cited by Colebrooke) make the *aratnī* equal to twenty-one thumb-breadths, and two *aratnīs* are one *kiṣku*; though some reckon a *kiṣku* as equal to four cubits. In vii. 175. 19, both these names, as if synonymous, are united in the description of a demon's bow, "a twelve-cubit-bow a cubit round," *vyaktam kiṣkuparīṇāham dvādaṣaratnīkārmukam*. Arjuna's bow, i. 189. 20; v. 160. 108, is as long as himself, *tāla-mātra*, "palm-tree tall," a common though indefinite measure, which according to i. 197. 39 is the height of all the Paṇḍus. The five-cubit (*kiṣku*) bow of x. 18. 6 is allegorical but may indicate the usual length. Arrows are "axle-long," *akṣamātra*, passim, and the *añjalika* arrow mentioned in viii. 91. 41 is three cubits, *trayaratnī*. A later form, *ratnī*, is used in this same book. Here, viii. 72. 30, it is said that Karna was *aṣṭaratnīḥ*, "eight cubits" tall (in iii. 126. 32 a man "grew thirteen cubits," *avaradhata kiṣkūn trayodaṣa*, but he was Māṃdhātara, and enjoyed peculiar nursing). We might almost suppose that this so-called cubit, whether *kiṣku* or *aratnī*, was really a foot, or about twelve inches instead of eighteen. For the actual length of

Hindu bows and arrows are for the ordinary bow five feet and for the ordinary arrow two and a half to three feet (*Rūting Caste*, pp. 270, 276), and both five and six "cubits" are the size of the epic bows, while the one arrow measured is given as three cubits, the heroes being a little above but not much over the normal height and only Karna being of eight *ratnis*. Even he is not extolled as a giant, as a man of eight cubits would be. "Palm-tree tall" and another phrase used of the heroes, *gāla-stambhā ivo 'dyatāḥ*, "lofty as Gāl trees," v. 169. 7, are more grandiose than exact. As the later schemes reckon the cubits in thumbs (or fingers), the twenty-one and twenty-four thumbs that go, respectively, to an *aratni* and *hasta* must be estimated by the size of a Hindu hand, which at present is rather small. Further, the relation between thumb-joints and span, reckoned as from the end of the thumb to the outstretched fore-finger, is given as twelve, which is too many, for the distance corresponds rather to the relation between the span and the finger-breadth. Reckoned as eight inches, a normal span, the later cubit would be nearer sixteen than eighteen inches and the *ratni*, being still shorter, would not be much over a foot. According to the *Suṣṛṇṭa*, a man's height is one hundred and twenty thumbs, i. 126. 11, or ten spans, which at nine inches to a span would make the average Hindu seven and a half feet tall and at seven inches would still make him nearly six feet.

Foot and Pace: The measure by foot-pace is almost confined to a conventional "eight paces," *padāni*, often used in battle-scenes, but always, if I am not mistaken, in the same way, *āplutya*, or *abhyetya*, *padāny aṣṭāu*, as in vii. 15. 28; ix. 12. 20. Even a deer "went eight paces and then turned," *tataḥ sa hariṇo gatvā padāny aṣṭāu nyavartata*, xii. 273. 14. According to the *Mārkaṇḍeya Purāṇa*, cited by Colebrook, *Essays*, vol. i., p. 539, a *pada* is a foot-breadth and not a pace, being only half a *vitasti* span or six fingers (thumbs). In the epic, as in "seven paces" in the marriage-rite, and in the colloquial phrase *pade pade*, "step by step," the word means a general pace-length or step. "Not a step" is almost equivalent to the French *ne pas*; for example, *nā 'kampata padāt padam*, "he did not budge a step" (at all), a common phrase, as in ix. 57. 46. The later epic has *padakam padakām śanāiḥ*, "step by step, slowly," xiii. 53. 35, and another passage has *ekapadam* in the sense of "in one word," iii. 313. 69.

Arms and fathom: Estimated at four or five cubits in later works, the *vyāma*, space between the outstretched arms, is used a few times, but only of trees and sacrificial appurtenances. A bough *daṣavyāma*, ten *vyāmas* long, is mentioned in a repeated phrase, iv. 23. 21, etc., and a *redī daṣavyāmāyatā navotsedhā*, "ten *vyāmas* long and nine high," in iii. 117. 12; while the circumference of a sacrificial post, as made in the good old days of marvels, is given as one hundred, *yūpaḥ śatavyāmaḥ parināhena*, vii. 68. 12. The divine discus of Kṛṣṇa is *vyāmāntara*, which the scholiast says is "five cubits, the space between the outstretched arms," *prasāritayor hastayor yārān viśtārāḥ pañcāhastamitaḥ tāvat*, v. 68. 2. It may be called in general (cf. Śat. Br. i. 2. 5. 14, etc.) a sacerdotal measure, not employed in the tables, and, except for the measurement of trees, it keeps this character in the epic.

Rods and Bows: Another sacerdotal implement was the *ṣamyā* rod, the cast of which, according to the epic, measures the interval between the altars set up by a very pious man. The rod, according to the scholiast, is pointed at one end and has a thick knob at the other, and is thirty-six thumbs, two and a half statute cubits, in length. When one "sacrifices by the rod-cast," one goes around the earth sacrificing at intervals, which are measured by the distance a strong man can fling the rod, *ṣamyā* in the epic, or, according to the scholiast, *sampā*, from its fall, *sampatati*. The technical expression is *ṣamyākṣepaṇa* (*vidhinā*) or *ṣamyākṣepāṇi* (*devān yajati*), "sacrifice to the gods by the cast of the rod," iii. 90. 5; xii. 223. 24; xiii. 103. 28. The only varying usage is found in iii. 84. 9, where a Tīrtha is described as being "six rod-casts from an anthill," *ṣaṭsu ṣamyānīpāteṣu valmīkāt*, but this is still in a sacerdotal connection. Measure by arrow-casts is confined to estimating time, as will be shown hereafter.

Bows are used for measurement, but the epic examples give no clue to the length, though later authorities reckon this as equal to a staff, *daṇḍa*, or four cubits, which must be regarded as the length of a bow (six feet). In the three epic cases, two forms of the word are used, *dhanus* and *dhanu*: "dragged eight *dhan-nūṁṣi*, i. 153. 40; "struck ten *dhanvantarāṇi*," viii. 83. 9; "land measuring one and a half thousand of bows," *dhanuṣām*, viii. 88. 10 (cited above, p. 137).

Yuga : This is said to be a measure of four cubits. In iii. 296. 10, *yugamātroditē sūrye*, "when the sun is up a *yuga*" (N. *yugam hastacatuṣkaṁ*), when the matutinal-rites are performed (*kṛtvā pāurvāhnikāḥ kriyāḥ*). I have not found the word elsewhere in this sense, and as a measure it does not appear to be an old term.

Nalva : I am not aware that the *nalva* or *nala* is an early term of measurement. In the great epic it is confined to the seventh book and to the mass which I call pseudo-epic, especially to the Harivaṅṣa. It is, further, not in the Rāmāyaṇa in its earlier form but it has been added to it in the later re-writing of that poem. The word epitomizes the gradual growth of the epic. The Bombay text has *nala* and *nalva*, but not without metrical reason for the choice. We find in vii. 70. 16 (the latest addition to the chronicles of kings), *vedīm aṣṭanlotse-dhām*, which is repeated in xii. 344. 60. In the former case it is defined by the scholiast as four cubits; in the latter, as a finger, with *tala* as v. l. Again, vii. 156. 58, *mahārathani triṅganalvāntarāntaram*, and, in a scene which in many points is a mere repetition¹ of this, vii. 175. 12, *nalvamātram mahāratham*, which is repeated in 176. 15 (written *nalla* in these two verses in C.), but nowhere else till we get to xii. 29. 143, where, also in the chronicles of the "kings that died," we find that Pṛthu Vāinya gave to the priests *hāiranyāns trinālotsedhān parvatān ekaviṅcatim*. It is interesting to see that the Droṇa account of the "sixteen kings," in adding the sixteenth, has taken from Pṛthu this laudation and inserted it in the next and last (lacking in Čānti). In vii. 62. 13, the phrase is *hāiranyān yojanotsedhām āyatān gaṭayojanam*, giving height and length. In the cases cited it will be observed that *nala* is not simply a *falsche Schreibung* (PW.), but a necessary metrical alteration (*nalla* alone being wrong). In xii. 154. 7, a tree is *nalvamātraparīṇāhaḥ* (where N. defines the measure as *hastānām gatacatuṣṭayam*, which removes the doubt expressed in PW. as to *catuḥgaṭam*), "four hundred cubits in circumference" (this attributes the greatest circumference to the tallest

¹ It repeats the preceding text, but *adhyāya* 175 is the original. Besides the one *nalva* raised to thirty in 156, we have the *cakra*, which in 175. 46 has still only 1000 spokes while in 156. 77 it has 100,000.

tree known, the *gālmali*). A Kālāmra tree is *yojanotsedhaḥ*, vi. 15 (not a Dvīpa, PW., but a tree that gives perpetual youth). A following stanza tells of another wonder-tree, estimated as being one thousand and one hundred leagues tall, which measures the *utsedha* or height from earth to sky, vi. 7. 21. Its circumference is "of *aratnis* one thousand and hundreds ten and five" (2500 cubits).

Kroṣa : The *kroṣa*, Anglo-Indian *koss*, which means literally a "scream" and is estimated in later works as two thousand "bows" or a fourth of a *yojana*, is the usual number to indicate travelling distances, not in multiples but always as a *koss*, as if one always went just one *koss* unless he went at least as much as half a *yojana* (rare, ii. 2. 22, *yojanārdham atho gatvā*, in accompanying a departing guest) or a *yojana*, which latter is used for all long stretches. The almost universal use of *yojana* for this purpose rather than two or three *koss* would indicate that the *yojana* was shorter than is usually assumed. It is not often that a *koss* indicates height, but the examples below will show one case of mountains thus measured. For journeys, besides the use of the half-league in the example just given and the league, as in vii. 112. 12, *itas triyojanam manye tam adhvānam . . . yatra tiṣṭhati*, "I think it is a course of three leagues from here (to) where he stands," we have in the following examples the regular (single) *koss*: iii. 271. 53, *kroṣamā-trāgatān aṣvān*; vii. 99. 9, *rathe kroṣam atikrānte*; ix. 29. 42, *kroṣamātram apakrāntaḥ*; xi. 11. 1, *kroṣamātram tato gatvā*. In other measurements: vii. 103. 37, *tasthāu kroṣamātre samantataḥ*, "at a distance of a *koss* on every side."

A great archer shoots a *koss*: "He seized several arrows and when he had fitted them to his bow quickly as if they were one, they fell at a distance of a *koss*," *kroṣamātre nipatanti*, viii. 79. 57; *rathasthito 'grataḥ kroṣam asyati śarān*, vii. 99. 9. Mountains "raised a *koss*" are mentioned in vii. 65. 10, *parvatāḥ kroṣam ucchritāḥ*. Most of the other cases of the use of *koss* are quite as useless in helping to a determination of its real length. They are as follows: For a *koss* on every side around a beleagured city the earth is broken up and mined, *samantāt kroṣamātram*, iii. 15. 16; ponds are of this extent, *vāpyaḥ kroṣasammītāḥ*, vii. 56. 7; the heroine can be smelt up to a *koss*, *gandhaḥ cā'syāḥ kroṣamātrāt pravāti*, i. 197. 36; *kroṣāt pradhāvati*, i.

167. 46 (see below on *yojana*). The only passage that seems to cast light on the epic measure is found in xiii. 90. 37, where speaking of the purifying effects of the men "fit for the row" and of the *daśapūruṣa* (gl. 27), that is, a man tenth in descent in inherited Vedic wisdom (one who has nine generations of pious and learned ancestors), the poet says: "They purify as far as they see . . . even one such would purify to a distance of two and a half *koss*," *yāvad ete prapaśyanti puṅktyās tāvat mananty uta . . . kroṣād ardhapṛṣṭyā ca* (above, p. 133) *pāwayed eka eva hi*. Here, as two and a half *koss* are regarded as less than the limit of ordinary ability to see a person, and five and a half miles far exceeds this, it would seem that in the epic the *koss* was not two miles and a quarter but nearer one mile, as is the estimate of the Viṣṇu Purāṇa (which ascribes to it, Colebrooke, *loc. cit.*, four thousand cubits, a thousand bows, against the Āditya Purāṇa's estimate of eight thousand cubits), or, exactly one mile and one eighth rather than two miles and a quarter. This, however, is based on two surmises, first, that the "even one" clause introduces a restriction applicable also to the distance as less than that previously mentioned, which seems to me legitimate, and, second, that the expression "as far as they can see" means as far as they can see a person (that person becomes pure by being seen). This latter surmise also seems to me to rest on the intended meaning, though it is possible that the expression merely means as far as eyesight can reach, in which case the passage is as useless as the others.

Gavyūti: After the *koss* comes the *gavyūti*, estimated by later writers as two *koss*. It is used in the epic to give distance, *gavyūtimātre nyavasat*, "stayed at a distance of four miles," iii. 239. 29; and, in the bombast of the late book of Droṇa, the battle-array is estimated as extending twelve *gavyūtis* or forty-eight miles, *dirgho dvādaśagavyūtiḥ* (*paścā 'rdhe pañca viśṛtaḥ*, and twenty in the rear), vii. 87. 22, a statement the more remarkable as the whole battle-field is only five leagues in extent, v. 195. 15. In vii. 87. 14 is found also the expression, *gavyūtiṣu trimātrāsu* (*tiṣṭhata*). The *gavyūti* is seldom used for travellers, but often for stationary extent of hall, camp, and quiescent distance, as in xii. 125. 18, where a deer springs ahead, but stands a *gavyūti* distant, *gavyūtimātreṇa, bānapatham muktṃ, tasthivān*. At least, it is not till the

late "house of lac" scene, i. 151. 20, *gavyūtimātrād āgatya*, "coming up to a distance of a *gavyūti*," and in the (also late) scene at (Gorresio) R. i. 79. 27, *gatvā gavyūtimātrakam*, that I find it with a verb of motion. This is doubtless because of its meaning originally a meadow, that is a field or acre, rather than a measure of length. According to Nilakaṇṭha, *goyuta* is the equivalent of *gavyūti*, as used in xiv. 65. 22, *goyute goyute cāi 'va nyavasat*, "he rested (camped) at every *gavyūti*," designating a daily march retarded by the weight of treasure carried. In any case the term is a solecism. A march like this, by the way, is described as being made *kramēṇa*, step by step, "slow march," xv. 23. 16.

Yojana: The "yoking" called *yojana*, estimated at two *gavyūti*, four *koss*, eight thousand bows, and consequently sixteen thousand cubits in the Āditya Purāṇa, is reckoned in the Viṣṇu Purāṇa as only half of this distance, that is, as nine miles in the former and four and a half in the latter work (Colebrooke, *loc. cit.*), but in the Mārkaṇḍeya Purāṇa as four *gavyūti* or eight *koss* (*cit. PW.*). I shall render it league. It is the longest measure and is used in estimating extent of length and surface. As the syntactical construction of this word includes that of all the others previously mentioned, I have reserved the subject for this paragraph. The construction varies between adjective compounds in the modifying word, adjective compounds with *yojana*, and accusative (nominative) or ablative of extent, as follows:

i. 30. 23, *sa tataḥ śatasāhasraṁ yojanāntaram āgataḥ
kālena nā 'timātreṇa*,

"in a short time he went a hundred-thousand league-interval,"
i. e. a distance (measured by) a hundred thousand leagues.

xiv. 9. 34-35: *sahasraṁ dantānāṁ śatayojanānām . . . daṇṣṭrāḥ catasrā dve śate yojanānām*, "a thousand of hundred-league teeth . . . four fangs two hundred of leagues." i. 175. 43, *tat sainyaṁ kālyumānaṁ triyojanam*, "the army was driven three leagues;" xii. 170. 15, *itas triyojanānāṁ gatvā*, "going three leagues from here."

ii. 7. 2: *vistīrṇā yojanaśatam śatam adhyardham āyatā . . . pañcayojanam ucchritā*, (a hall, *sabhā*) "one hundred leagues broad, one hundred and fifty long . . . five leagues high;" ib. 8. 2,

śatayojanā vistārāyāmasampannā bhūyasī cā 'pi, (a hall) "of a hundred-leagues, complete in breadth and height, and even more"; ib. 10. 1, thus in B:

*sabhā Vāicravanī, rājan, śatayojanam āyatā
vistīrṇā saptatiḥ cāi 'va yojanā 'tisitaprabhā,*

where C. has *yojanāni sitaprabhā*. C. has the right reading; the construction is "broad, seventy leagues" (in the nominative), and not "seventy were broadened" (leaving *yojanā* to be construed as a Vedic form with *saptatiḥ*), for the construction throughout, as is customary with *vistīrṇa* and *vistṛta*, is to make *vistīrṇā* agree with *sabhā*.

Ordinarily, the accusative, as in *kroṣam uccṛitaḥ* (above, p. 146), expresses the extent, and this may be assumed to be the construction when the form leaves the case ambiguous, as in the answer to the question, "How long is the road between the world of Yama and the world of men?" (given as) "between (etc., is) eighty-six thousands of leagues," *Yamalokasya cā 'dhwānam antaram mānuṣasya ca kṛṣṇaḥ kim pramāṇam vāi? śaḍaṣṭisahasraṇi yojanānāṃ narādhipa Yamalokasya cā 'dhwānam antaram mānuṣasya ca*, iii. 200. 44 and 46. Here it is clear that the numeral is in the accusative, and it is probably governed, as is *adhwānam*, by *gantavyam*, as in the following: *kiyaḍ¹ adhwānam asmābhir gantavyam itam ṛṣṇam? etāvad gamanam tava*, xviii. 2. 26 and 28. The locative may take the place of the accusative when the word "way" is used, as in xiv. 27. 3, *kiyati adhvani tad vanam*, "(on) how great a way is that forest?"

I do not find the nominative used to measure distance of movement (evidently because it is impossible to say one goes to a nominative) but only of stationary distance, that is, where no progress toward is implied. For example, one may not say the way is a *kroṣaḥ* but only *kroṣam* by analogy with "one goes a *kroṣam*." But, as in the example above, one may say a hall is extended so much and use the nominative, because the word extended does not mean goes to that distance; but extended is broad, and this ptc. adj. is equivalent to the noun breadth.

¹ But *kiyantam kalam*, ib. 5. 4. There is a passage, i. 126. 8, where *adhvan* appears as a neuter, *prasannā dīrgham adhvānam saṃkṣiptam tad amanyata* (N. supplies *gamanam*).

So in estimating the (stationary) height of a mountain one says that it is "upraised" so much in a compound preceding, as in *ṣaḍhyojanasamucchritaḥ* (*Kāilāsaḥ*), "a six-league-upraised" (mountain), iii. 139. 11; or that it is so many leagues, without anything to indicate that the numeral is not a predicate nominative, as in *trayastrīṅśat sahasrāṇi yojanāni hiraṇmayāḥ*, "golden (Meru is) thirty-three thousand leagues," iii. 261. 8; *yojanānām sahasrāṇi pañca śaṇ Mālyavāt atha*, "Mālyavat (is) five-six (eleven) thousands of leagues," vi. 7. 29;¹ or that it is "upraised" so many leagues in the nominative, as in

Meruḥ kanakaparvataḥ . . . se. tiṣṭhati
yojanānām sahasrāṇi caturaṣṭīr ucchritaḥ
adhasṭāc caturaṣṭīḥ² yojanānām,

"golden Meru . . . (stands) eighty-four (nom.) thousands of leagues upraised, (and) under(-ground) eighty-four (nom., se. thousands) of leagues," vi. 6. 10-11.

Further, there is the one construction where, instead of saying that the height or breadth of a mountain is so much, one may employ partitive apposition with (apparently) a nominative (predicate), as in

aṣṭādaśa sahasrāṇi yojanāni, viṣāmpate,
śaṭ śatāni ca pārṇāni viṣkambho Jambūparvataḥ
lāvaṇasya samudrasya viṣkambho dviguṇaḥ smṛtaḥ,

"eighteen thousand leagues and six full hundreds the breadth (is) Jambu-dvīpa, and the salt sea's breadth (is) recorded (as) twice as much," vi. 11. 5-6. The ordinary construction in such a case is to prefix the number, if it is easily managed, as part of a compound, as in *āḍityaparvataim daśayojanavistāram*, "of ten-league-extent," xii. 328. 23; or to put the dimension in an oblique case, as in

ekāikaṁ yojanaśatām vistārāyāmataḥ samam,

"each (city was) one hundred leagues (of a league-hundred) alike in respect to breadth and length," viii. 33. 19 (compare *pranāṇāyāmataḥ samam*, of a man, i. 222. 31); but with such

¹ Here occurs a word rare enough in early texts to be noticed, *mahā-rajata* as gold- (colored people). Cf. *JAOS.*, xx., p. 221 for *hiraṇya* as silver.

² For the meter, cf. No. 37 in the *Ḍloka*-forms of my *Great Epic*.

an unmanageable number as that above it is more natural to have the construction of the second part of the sentence a genitive, with the dimension in the nominative.

The locative gives the extent only when this is implied or conditioned by the context, as "on the way" (above) and in *ekādasa sahasrāṇi yojanānāṁ samucchṛitam, adho bhāmer salatsreṣu tāvatsa eva pratiṣṭhitam*, (Mt. Mandara), "eleven thousand of leagues upraised, and supported on just as many thousands below the earth," i. 18. 3. So "at six-rod-casts from the anthill" (above, p. 144), is only a location of place, not of extension; also *kroṣamātre* (p. 146).

Finally,¹ in estimating distance to a certain extent, the ablative may be used with some prepositions to convey the notion of exceeding the limit, or simply, beyond, while the ablative alone or with *ā* indicates the limit itself up to which the distance implied extends. Of the first case an example is found united with the instrumental in

xii. 336. 9, *Merorḥ sahasrāṇi sa hi yojanānām
dvātriṅgato 'rdhvaṁ kavibhir niruktah,*

"this (white island) is said by the poets (to be) from Meru more than thirty-two thousands of leagues" (by thousands more than thirty-two).

The antique expression *mūlāt*, "up to the root," is used, though rarely, both in this sense and in that of "from the root," that is from the beginning, but it is significant that the epic usually expresses the idea by a compound, as in

tataḥ samūlo hriyate nadīkūlād iva drumaḥ,

xii. 95. 21; or it is paraphrased, for example, *na mūlaghātāḥ kartavyaḥ*, xii. 268. 12. Moreover, in words expressing distance, the examples leave it a little doubtful whether the ablative means "from" or "up to," but by analogy with the same phrase with the preposition it would seem that the latter idea was that of the simple ablative. Thus, to express the idea of a smell extending a *koss* we find *kroṣamātrāt pravāti* and *kroṣāt*

¹ Of course I omit idioms which may be translated to give extent without really expressing this, such as *brahmādiṣu tṛṇānteṣu bhūteṣu parivartate*, "pervades all beings from Brahman to grass," iii. 2. 72 (a common phrase).

pradhāvati (above, p. 146); *tasyās tu yojanād gandham ājighranta narā bhuvī*, i. 63. 82; *āyojanasugandhin*, i. 185. 21; and, in the province of sight, *yojanād dadṛge*, ii. 24. 22; *āyojana-sudargaṇa*; and finally, *ā* with the ablative, as in *locanāir annujagmus te tam ā dṛṣṭipāthāt tadā*, "then they followed him with the eyes up to the limit of their vision," ii. 2. 26. As with time-words, *yāvat* is also used, *yāvac Cermanvati*, "as far as the river," i. 138. 74.

Another reason for taking the ablative as one expressing the limit up to (rather than the origin) is that it thus offers a perfect parallel to the use of the ablative with time-words, for, as I shall show in the next section of this article, the idea of a simple time-ablative expressing the time after which any thing occurs is erroneous, though this is the only explanation of this ablative given by Speyer (and adopted by Whitney). On the contrary, the time-ablative, unless expressly accompanied with *āvāhvam* or its equivalent in the sense of "beyond," always indicates time up to the limit expressed by the ablative, and so the extent-ablative indicates the extent up to the limit expressed by this case. With *adhi* the ablative means above, over.¹

When the name of a dimension is given, it is usually compounded with the number, and this has led Speyer in his excellent *Sanskrit Syntax*, § 54 a), to remark that "when naming the dimension of a thing one does not use this accus. [of space], but avails one's self of bahuvrīhi compounds." With few exceptions this is quite correct and as a general rule is perfectly unimpeachable. Thus in iii. 82. 107:

*ardhajojanavistārā pañcayojanam āyatā
etāvati Devikā tu,*

"of half-league-breadth, five leagues long (extended)—such is the size of Devikā."

vii. 66. 16, *ṣaṭtriṅśadyojanāyāmā² triṅśadyojanam āyatā
paścāt puraḥ caturviṅśad vedī hy āsūd dhiraṇmayī,*

¹ I take *yojanād adhi* in C. ii. 619 in this sense, but B. 14. 54 has *yojanāv adhi* (*triyojanāyataṁ sadma triskhandham y. a.*), and PW. interprets C. as "a Yojana high." This preposition, by the way, is used (in a way not recognized in PW. or pw.) with gen. of place, in H. ii. 79. 12, *ṣaṭpatnīnām adhi nityam bhaveyam*, "over my rivals."

² C. has *ṣaḍviṅśad*, čl. 2,849, which inverts the ratio and makes *āyāma*, length, into breadth.

“of thirty-six-league-length, thirty leagues broad (extended), in the rear (and) in front twenty-four (leagues), was the golden *vedi*.”

This arrangement, by which one member is made a compound of the noun of dimension and the other has the participle, is quite a favorite. The following example illustrates it again, together with another illustration of the extent given by a number-word, apparently in the accusative:

xiv. 58. 33, *ito hi nāgaloko vāi yojanāni sahasraṣaḥ*,

“from here the dragon-world (is) leagues by the thousand;”

ib. 37 and 40, *nāgalokaṃ viveṣa ha, dadarṣā nāgalokaṃ ca yojanāni sahasraṣaḥ . . . dvāraṃ sa dadarṣa pañcayojana-vistāraṃ āyataṃ śatayojanam*, “he went to the dragon-world, and he saw the dragon-world, leagues by the thousand . . . and he saw the five-league-size gate, a hundred leagues extended.”

Another example of the exceptional usage, whereby when naming the dimension of a thing one uses the accusative, is given by this case:

xii. 282. 7-8, (*dadarṣa*) *Vṛtraṃ dhiṣṭhitam parvatopamam, yojanānāṃ śatāny ūrdhvaṃ pañcocchritam, arimādaṃ, śatāni vistareṇā 'tha trīṇy evā 'bhyadhikāni vāi*, “he saw Vṛtra stand like a mountain five hundreds of leagues upraised on high (tall), and three hundred more in extent.”

When two dimensions are given, they may follow adverbially, as in one of the examples above and in xii. 339. 9, *śatayojana-vistāre tiryag ūrdhvaṃ ca*, “hundred-league-extent (peaks) transversely and up,” that is, two peaks having this extent in both directions; for *vistar*, *vistāra* is extent in general (*ākhyānam bahuvistaram*, “a long story,” vii. 52. 37; *śatayojana- and anekayojana-vistāra*, of ocean, “leagues broad,” iii. 282. 59 and 45), and may even limit, as a general term, *āyāma*, which is always length, as in (*dvīyojanasamutsedhā*) *yojanāyā-mavistarā*, “(two leagues high and) a yojana-length-extent weapon,” vii. 175. 97 (not in C.).

This last sentence (compare also the *naiva* citations, above, p. 145) gives the regular word for height, which is construed in compound form, as here and in i. 29. 30: *śaḍ ucchrito yojanāni gajas taddvīṇmāyataḥ kārmas triyojanotsedho duṣayojana-*

maṇḍalaḥ, "an elephant six leagues upraised and twice as extended; a three-league-height and ten-league-circle tortoise" (in English, three leagues tall and ten round).

ON π .

Although no word in the epic expresses the relation between the diameter and the circumference, yet this relation is given in figures, as applying to the size of the sun, the moon, and the "planet" that swallows them, the moon being rather larger than the sun.¹ The account of the size will be found at vi. 11. 3 (Rāhu); 12. 40 ff.; of the cause of eclipse, i. 19. 9 (*rāhu-nukha*). The relation between the diameter and the circumference differs inversely according to the size of the object, the greatest circle having the smallest ratio. Of the three heavenly bodies, Svarbhānu or Rāhu (the devouring planet) is circular, *parimaṇḍala*, no less than the moon and the sun, so that π can be established in this case as well as in the others. Its diameter, *viṣkambha* (breadth), is twelve thousand leagues, *yojanas*, and "in its circumference and extent," *pariṇāhena vipulatvena ca*, it is "thirty-six thousand sixty hundred" or 42,000 leagues, as say the Pauranic sages, *budhāḥ paurāṇikāḥ*. The moon's diameter, *viṣkambha*, is eleven thousand and its circle, *maṇḍala*, is thirty-three (thousand) and "sixty-less-one" (hundreds, given in the text as the *viṣkambha*, but this must be *pariṇāha*, as in the preceding case), making the sum in thousands (33) and in hundreds (59) equal in all to 38,900. The sun in diameter is "eight thousand and two more," *anye*, and its circle is equal to thirty (thousand), *maṇḍalan triṅgatā samam*, and fifty-eight (hundred) in extent, *vipulatvena*, or 35,800. Thus (instead of $\pi=3.1416$):

¹ This is not strange. In fact, the full moon in India on a clear night certainly looks larger than the sun even when the latter is on the horizon. Especially at the end of a dusty day; when the moon seems twice the size even of the harvest moon of this country. But this is not the only reason for the great size attributed to the heavenly bodies as compared with that assigned by the Greeks. Even the stars are regarded as huge worlds "because though small as lamps in appearance they are so far removed" (the passage is given in my *India, Old and New*, p. 59, from iii. 42).

Rāhu, 12,000: 42,000 $\pi=3.50$

Moon, 11,000: 38,900 $\pi=3.53+$

Sun, 10,000: 35,800 $\pi=3.58$

There is nothing to indicate that the *yajana* here used is the special astronomical *yajana* of later works. According to the *Sūryasiddhānta*, iv. 1, the sun's diameter is 6,500 (astronomical) *yajanas*, and the moon's is 480, while π in that work is 3.1623 and 3.14136, according to circumstances (Whitney's notes, *JALOS*. vi. pp. 183 and 201). A little later, in the fifth century, Āryabhaṭa (Thibaut, *Astronomie*, etc., p. 75, in Bühler's *Grundriss*) knew that $\pi=3.1416$, and it seems grotesque enough that even an epic poet could give such statements as those made above, if he had an approximate notion of the true relation. For it is not as if the author carelessly (poetically) said that the sun's circumference is about three and a half times its diameter. The numbers are given in detail for three different circles and show that the calculation had been made in each case. But any boy with a string and a tree-stump could get nearer to the true ratio than 3.5.

[To be continued.]

A Phœnician Royal Inscription.—By CHARLES C. TORREY,
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IN the summer of the year 1900, a number of stones, bearing the same Phœnician inscription in somewhat varied form, were unearthed near Sidon. They formed part of an extensive ruin, the existence of which had been unsuspected until accident brought it to light.

The locality is somewhat less than two miles north of the modern city, half way up the slope of the hills, which face the sea and are here about half a mile distant from it. At this point the Auwaly river breaks through, and the hills rise very abruptly from it, especially on the south side, where the ruin just mentioned was discovered. It has long been known that large buildings of some sort must have stood in this neighborhood, for great blocks of hewn stone have been found, in considerable number, on either side of the river. The bridge which crosses the Auwaly here is built in part of such blocks, the position of the marginal draft on some of them showing that they were not originally intended for their present place.

There is good reason to believe that the ancient city of Sidon extended far beyond the limits of the present city, especially to the northward. Indeed, we have some evidence that it reached even to the locality just described. The geographer Dionysius Periegetes (third or fourth century A.D.) says of Sidon, in an oft-quoted passage, that it was situated "on the Bostrenus." It is quite beyond question that the Auwaly river is here meant, but few in modern times have been disposed to believe that the old city actually extended so far; see, for example, the article "Bostrenus" in the new edition of Pauly's *Real-Encyclopædie*. It is quite possible, however, that the statement of Dionysius was literally accurate; at any rate, the evidence now brought to light must re-open the question.

The discovery of the inscriptions was on this wise. Workmen engaged in removing the stones of a large wall which had been partially uncovered came upon a block with an inscribed face. No sooner had this been removed than another, similarly



inscribed, was found. Others followed, until (as was reported) five in all had been taken out.¹

Happening to be in Sidon soon after this, in the fall of 1900, and hearing of the discovery of the inscriptions, I visited the spot several times, and also managed, after some difficulty, to get sight of one of the inscribed stones—the same one which is reproduced in the present article, though its two pieces were then in different localities, and it was not until some time later that I was able (thanks to the help of Professor Jewett, of the University of Minnesota) actually to get possession of it. A rather poor squeeze made from one of the other stones gave valuable help. The inscription presented the usual proportion of difficulties, though nearly every letter could be made out with tolerable certainty. All its most important features, however, were plain at the first glance. The building from which the stones had been taken was a temple, built and dedicated to the god Ešmun by Bad-‘Aštart, King of Sidon, “grandson of King Ešmun‘azar.” The points of contact with the Ešmun-‘azar inscription were also sufficiently obvious, and seemed to furnish a clue to the relative position occupied by this king Bad-‘Aštart in the Sidonian dynasty already partially known. The new inscription thus proved to be one of no ordinary importance.

As for the temple-ruin, the little that could be seen consisted of portions of two parallel walls running east and west. Each was built of nearly cubical blocks of limestone, from three to four feet in thickness. The upper wall consisted of two courses of stone; that is, was seven or eight feet in thickness. The lower wall, perhaps fifty yards further down the slope of the hill, was still more massively built. The whole edifice, thus solidly constructed, and of such imposing dimensions, was situated just at the turn of the mountain, where the river valley opens out into the narrow maritime plain. It is an ideal site for a temple, the outlook embracing a wide strip of the sea, the picturesque river below, and the whole extent of the deep valley beyond; it is, moreover, the one spot near Sidon where a comparatively unobstructed view eastward is to be had.

I was unable to gain sufficiently exact information as to the position of the inscribed stones in the wall (it was the lower

¹ Regarding the subsequent discovery of a sixth stone, see below, p. 178.

wall) where they were found. Of this, however, I was repeatedly assured by workmen who had seen them *in situ*, that they occupied no typical position, but that the inscribed face was sometimes uppermost, and again beneath, or on one of the perpendicular sides. All five were found very near together, the blocks containing them being of the same general shape and size as those already described, and situated in the core of the wall, so that no one of them could have been seen when the edifice was completed.

The inscription was not exactly the same in all cases. On two of the stones it was practically identical with the one which I was so fortunate as to secure; the only differences, so far as I could ascertain, being due to peculiarities of orthography, or to the carelessness of the stone-cutter. My knowledge of one of these two (which I shall cite, for convenience, as Inscription B) was gained from an imperfect copy—not a squeeze—made by one who was quite unable to read the inscription; the other—the one from which the squeeze above mentioned was made—I was permitted to see on one occasion, but only for a moment, not long enough to enable me to study it, or even to make a hasty copy. This latter inscription, a very carefully executed and well-preserved specimen, exhibited one or two forms of letters which were so peculiar as to lead me to doubt its genuineness; these doubts I have since withdrawn, however, and shall have occasion to refer to it (citing it as Inscription C) once or twice in the sequel. On a fourth stone (Inscription D)—to judge again from a single copy—the wording was somewhat abridged; moreover, in this case just half of the inscription was missing, and it was evident that it had originally occupied two adjacent stones, in two long lines and the beginning of a third, instead of filling five or six lines on a single stone. Regarding the fifth stone which was reported to have been found I could gain no information at all. Possibly it may have contained the missing half of the two lines just mentioned.¹

It remains to describe the stone containing the inscription (designated as A) which is published and commented upon in the following pages.

¹ All of these stones were “on the market,” and at least two of them had left Sidon before my arrival. I do not know what has become of any one of them excepting the one which I myself purchased.

It is a slab of soft limestone, three and one-half feet in length, one foot and eleven inches wide, and five inches thick. It seems to have been sawn from one of the blocks described above as forming the building units of the temple, and to have been accidentally broken in the process, so that it now consists of two pieces, which join fairly well. Fortunately, this break has not obliterated any letters which cannot be supplied with certainty. In the lower right-hand corner, a piece which contained several letters or parts of letters has been broken away. The surface of the stone is not evenly weathered, but is somewhat more worn towards the left side. For this reason, a number of the characters on the smaller piece are nearly obliterated, while those on the larger fragment are for the most part very distinct.

The inscription is in four and one-half lines, the number of letters to the line varying between nineteen and twenty-four. The end of the line happens in each case to coincide with the end of a word.¹ The characters used are of a type identical with that which appears in the inscriptions of Tabnit and Ešmun'azar. The only letter whose shape seems to deserve special mention is the **𐤊** which stands at the beginning of the fourth line. So far as its form is concerned, it might well be a **𐤊** (though somewhat long, and with not quite the usual slant); but if I am right in my understanding of the passage, the letter is a form of **𐤊**, differing but very slightly, after all, from the one which is seen at the end of the first line.

The workmanship is generally very good, though occasionally a trifle careless. The letters were originally colored with red paint, which still appears very distinctly in the better preserved parts of the stone, and can often be found by lightly scratching the surface in the more weathered portions.

The text of the inscription follows. Letters destroyed either wholly or partially by the accidental breaking of the stone are indicated by square brackets []; letters which cannot be clearly made out or which for any reason should be designated as uncertain, by a dot placed above.

¹ In the parallel inscriptions, on the other hand, it happens in several cases that a word is divided between two lines.

מלכברעשתרת[מלכ]צרנמנבנמלכ
 אשמנעזרמלכצ[ר]נמבצרנימ
 שממרממארצרשפ[מ]צרנמשל'אשבנ
 כצרנשראיתרהב[ת]זבנלאלי
 [לאשמ]נשרקדש

This I should divide as follows:

מלך בר עשתרת מלך צרנמ בן בן מלך
 אשמנעזר מלך צרנמ בצרן ים
 שמם רמם ארץ רשף מצרן משל' אש בן
 כצר נשר אית הבת ז בן לאלי
 לאשמנ שר קדש

TRANSLATION.¹

The king Bad-‘Astart, king of the Sidonians, grandson of the king | Ešmun‘azar, king of the Sidonians; reigning in² Sidon-on-the-Sea, | High Heavens, [and] the Rešep District, belonging to Sidon; who built | this house like the eyrie of an eagle; (he) built it for his god, | Ešmun, the Holy Lord.

COMMENTARY.

Line 1. Regarding the name Bad- (or Bod-) ‘Astart, **בר עשתרת** “Offshoot (or Branch) of Astarte,” see Lidzbarski, *Handbuch der nordsemitischen Epigraphik*, p. 134, note 4. A king of Sidon bearing this name is known to us from the inscription *CIS.* I 4. On the question whether our king is to be identified with this one, or with either “Strato” mentioned by Greek writers, see below.

The word **מלך**, in the middle of the line, is entirely broken away.

צרנמ as usual for the people, or the political unity (as almost always on the coins of Sidon, for example); for the city itself,

¹ It is hardly necessary to say that this translation is offered as an attempt, not as the final solution. No one can realize more keenly than I the uncertain character of many of the conclusions which are reached in the following pages.

² Or, ruling over.

צדן, so in lines 2 and 3—in the latter case, the city inclusive of its outlying districts. The letters of the word are all distinctly legible.

בן בן מלך אשמנעז, “Grandson of King Ešmun‘azar.” The very same words in the Ešmun‘azar inscription, line 14. As will soon appear, the coincidence is not merely verbal, but the same king—the one known to us as Ešmun‘azar I.—is meant in both inscriptions. It is unfortunate for us that Bad-‘Astart should have omitted to give the name of his father. It would not be difficult to imagine a plausible reason for the omission, even if we suppose the father to have been King Tabnit. It is possible, however, that the latter was the uncle of Bad-‘Astart, not his father. See further below.

Line 2. בצדן ים. In Inscription C, this is written אבעדן ים, that is, this text affords us a new example of the rare form אב of the preposition ב, a fortunate circumstance. It is plain that בצדן ים is the equivalent of the phrase צדן ארץ ים, which occurs twice (lines 16 and 18) in the Ešmun‘azar inscription.¹ In the latter passages, there is nothing to show that the phrase meant anything more definite than ‘the parts of Sidon adjoining the sea.’ In the new inscription, on the other hand, if my reading of it is not erroneous, three separate and definite districts “belonging to Sidon” are mentioned by name; and in such a way as to imply that these three districts comprised in themselves all the territory properly included within the limits of the city. The name “Sidon-on-the-Sea,” as the designation of one (and apparently the principal one) of these districts, suggests first of all the cape on which the modern city stands. Here, of course, was the citadel, and the most important part, of the ancient city, and it is highly probable that this was the צדן ים of our inscriptions. The district bearing this name may, however, have included also an adjoining portion of the maritime plain; see further below.

Line 3. שמם רמם.² An extremely interesting phrase, especially because it at once suggests the problematic שממאדרם

¹ For a third (probable) variation of this phrase, see below, page 172.

² The reading of Inscription C is noteworthy here. In the second ם of שמם, the shank of the letter slants sharply to the right, and the top has a somewhat unusual shape; the resulting character does not closely resemble any known Phoenician letter (it certainly is not ד).

of the Ešmun'azar inscription (lines 16 and 17), with which it is certainly to be connected. As the name of a district—which seems to be absolutely required in the Bad-'Astart inscription—it can only have designated the heights just back of Sidon, including probably in that case a strip of hill-country extending as far northward as the city itself extended. The name "High Heavens" is a fanciful one, it is true; but abundant parallels in this regard can be found among Semitic place-names. Regarding the use of the twice-repeated שם אדרם in the Ešmun'azar inscription, I confess to some perplexity. This much, indeed, seems now to be established by the new evidence, that the letters are to be divided in the way just indicated, שם being the noun, "heavens," and אדרם (אדרם?) the attributive adjective, "glorious, mighty." Two difficulties seem to stand in the way of regarding this phrase as merely another form of the name given by the Sidonians to the hill-district of their city: (1) We should expect the form of a proper name such as this to be fixed, not variable; (2) the meaning "hill-district," while it suits the context admirably in Ešm., line 17, does not, at first sight, seem to be in place in line 16. But these two difficulties are more apparent than real. As for the variation in the form of the name, such unstable usage in the case of local designations is very frequently met with,² especially where the name has been only a short time in use, as may well have been true in this case. It is possible, of course (though the supposition is not a necessary one), that the district was first named in this way in the time of Bad-'Astart, and that the adjective רם, "high, lofty," was very soon improved to the more high-sounding אדר, "glorious, mighty." As for the context of the word in Ešm., line 16, the whole passage (lines 16, 17) runs as follows: "It was we who built . . ."¹⁸

Moreover, in רם the second letter is not מ, but י! These singular variations, with the reading ר for ה in line 4 (see below), and one or two minor peculiarities, seemed to me at first to prove beyond question that Inscription C was a forgery. I am inclined now to think that even such blunders as these may have been possible for a Phoenician stone-cutter. My copies of B and D (untrustworthy, to be sure) both give שממרם.

¹ Compare the use of this adjective in Ešm. line 9, Ma'sûb line 6.

² The variation between צרן ים and צרן ים, in these same inscriptions, is a somewhat similar case.

the temple of 'Aštart in Sidon-on-the Sea, and who made 'Aštart to dwell in **שָׁמַם אֲדָרִם**; and it was we "who built a temple to Ešmun in the mountain, and made him dwell in **שָׁמַם אֲדָרִם**." At first sight, one temple only seems to be thought of in line 16, as only one is intended in line 17; and in that case, **שָׁמַם אֲדָרִם** could not be the name of the hill-district. But the wording in line 16 is not quite parallel to that in line 17; notice the repetition of the name 'Aštart. It is more probable that *two* temples are intended in line 16, one in the sea-district and another in the hills overlooking the city. Recollect that the mother of Ešmun'azar was a priestess of 'Aštart; it must be borne in mind also that the verb **יָשַׁב** in such passages as these may be a technical term referring to some special ceremony, which might have the nature either of the dedication of a new building or of the re-dedication of an old building. In view of all these facts, it seems to me that no other theory can hold its ground against this one, that **שָׁמַם רָמַם** and **שָׁמַם אֲדָרִם** are merely slightly differing forms of the same phrase, which is everywhere to be regarded as the proper name of the hill-district included in the city of Sidon.¹

אֲרִין רֶשֶׁף, "The District of Rešep (or Rešûp)." If the designation **יָם צֶדֶן** included merely the cape where the modern city stands, it is easy to determine the position and the approximate limits of the **אֲרִין רֶשֶׁף**. It could only be the region lying east and north of the cape, the strip of nearly level plain between the mountains and the sea, running northward perhaps as far as the Auwaly river.² We should then have three districts which are topographically very well defined, and which would comprise all the territory that we know to have been

¹ Why the word **שָׁמַם** should have been chosen, in naming this district, it is perhaps useless to conjecture. Flights of fancy are not easily followed. But the use of the adjective **אֲדָרִם** seems to show that the meaning of **שָׁמַם** in the phrase was neither simply "skies" nor "heights." Perhaps the region was thought of as being in an especial degree the 'abode of the gods.' It would be strange, indeed, if it had not contained a number of conspicuous temples. And finally, it is quite possible that the designation was very short-lived, and employed in its day chiefly by the members of this royal family.

² This region is now occupied, for the most part, by the famous orange groves of Sidon; but traces of the old city are still to be found, here and there, if the spade goes far below the surface.

included in the city proper. The plain to the southward seems to have been used only as a burying-ground. It is, of course, possible that the term **צדן** [**ארץ**] **ים** included more than the cape; on this supposition, any attempt to determine the limits of the three districts must be fruitless.

מצדן. The crack passes directly through the letter **מ**, so as to efface the perpendicular stroke across the top line. I have therefore marked it with a dot, although the reading is practically certain.

משל. Of the two dotted letters, the first is entirely gone, but the hole in the stone is of such a shape and size as to show that the missing character must have been either **ש** or **ע**. The **ל** following is practically certain, for the horizontal line, with the angle at the left, remains distinct, and it is quite plain that the letter was not continued downwards. My copies of B and C both read **של** here; in D, this part of the inscription is missing. Compare the use of **משל** (participial noun, as here) in Ešm. line 9. The word is evidently to be connected with the preceding, not with the following; **אש בן** begins a new clause. The preposition **ב** in **בצדן** (line 2), whose force extends also over the following names of the Sidonian districts, may be either the preposition of place, "ruler *in* Sidon-on-the-Sea, &c.", or the complement of the verbal idea, "ruling *over*" these districts.

בן. My copy of C reads **ע** in the place of these two letters, and this reading seems to be confirmed by the squeeze. But the squeeze is quite untrustworthy at this point; and as my copy was made from memory (see above) and before I had translated this part of the inscription, the variant reading deserves little confidence, especially as both letters are perfectly plain on stone A.

Line 4. **כצדנשר**. On the form of the **כ**, see above, page 160. In what follows, **ר** might be read (twice) instead of **ר**, but no plausible reading would result, so far as I can see. On the other hand, the comparison of this temple, perched in its commanding position on the spur of the mountain, with "the eyrie of an eagle" would be a happy one, though something of an exaggeration. **צד** is probably **צור** (or **צר**), "rock," so that **צד נשר** is the rock or crag where the eagle dwells.

הבת. The letters are somewhat widely separated, but all three are very distinctly legible. In place of the **ה**, Inscription

C gives distinctly and unmistakably ר, the upright stroke of the character being unusually long.

בן. If I have divided the text correctly, this word begins a new clause, the preceding noun בת being the direct object of the בן at the end of line 3. The object is then understood with the verb in line 4. Inscription D ends with the words אית הבת, which stand at the beginning of line 3 (the preceding words, in the second half of line 2, are missing; see above).

לאלי. The ' is hardly legible. All this portion of the stone is very much weathered.

Line 5. [לאשמן]. The ש is almost entire, and the upper part of the מ is preserved; both letters are unmistakable. The remaining space at the beginning of the line was of course occupied by the two characters לא.

שר קדש. An accident to the stone has somewhat obscured the lower part of the ק. שר is probably שר, "lord," though the word has not been found elsewhere in Phoenician inscriptions. קדש might be either adjective or noun (as usually in Hebrew), but is probably the former, whose plural occurs in the expression אלנם קדשם, "holy gods," Ešm. 9, 22. Finally, the whole phrase, לאשמן שר קדש, finds an extremely interesting and important parallel in the passage Ešm. 17, where the reading given by Lidzbarski (*Handbuch*, p. 418) is לאשמן ד-קדש. It would be obvious, even without further evidence, that the Bad-ʿAštart inscription furnishes the true reading of this hitherto doubtful passage; there is, however, additional evidence sufficient to prove not only the identity of the two phrases, but also to show that one and the same temple is mentioned in the two passages, as will appear in the sequel.

Several noteworthy verbal coincidences with the Ešmunʿazar inscription have been pointed out in the preceding pages; and when it is remarked in addition that king Bad-ʿAštart styles himself a "grandson of Ešmunʿazar," בן אשמנעזר, the probability becomes very strong that we have found a new member of the famous dynasty. Fortunately, however, the evidence is such as to lead to much more definite conclusions, and the value of the new inscription is enhanced accordingly.

As has already been observed, above, it is the passage Ešm. line 17 which affords the all-important point of connection with our inscription. The full text of the passage is as follows: **ואנחנו אש בנן בת לאשמן שר קדש ען ירלל בהר וישבני** **שמש אדרם**; "And it was we who built a temple to Ešmun the Holy Lord, by the spring **ירלל**, in the mountain, and made him to dwell in [the district] **שמש אדרם**." The detailed manner of the description of this particular temple is noticeable; and it is a fortunate circumstance for us, for it enables us to recognize with certainty in this house for Ešmun, of which the queen-mother Em-(or Am-)Astart, speaking for herself and her dead son, says, "we built it," the very same temple whose ruin now stands on the hill above the Auwaly river. The coincidences already noticed, that the temple was in each case "in the mountain" and dedicated "to Ešmun the Holy Lord," might not be sufficient of themselves to put the identification beyond question; but when the remaining item of the description, the mention of a "spring" (**ירלל**) **ען**; however the second word of this phrase may be translated), is added, the proof is quite conclusive. There is only one spring of any importance in all the mountain district adjoining Sidon, and that one is on the hillside near the Bad-Astart ruin. It is about two hundred yards distant, in the direction of Sidon, in a recess of the mountain slightly below the level of the temple, and in full view from it. The fountain itself is now quite concealed from sight, for it lies well below the surface of the ground, and its waters disappear at once, but reappear a dozen paces to the northwest, where the mouth of a tunnel, now hidden by bushes, is seen in the hillside. From this point the waters are led by a remarkable subterranean aqueduct straight through the mountain to the gardens of the city.¹

¹I could see nothing to indicate that the fountain itself had its origin in a similar tunnel-aqueduct, but this may possibly have been the case, water being conducted hither from some point on the Auwaly far to the eastward. Supposing this to have been true, the present argument would not be affected, for the juxtaposition of artificial spring and temple would be the best of evidence that the aqueduct was of Phœnician origin. It may be that the problematic **ירלל** contained some reference to this most important bit of engineering. Is it not possible to fall back on the Arabic **دَلَّ**, "lead, conduct," and interpret **ען ירלל**,

The temple on the "Bostrenus", then, is included in the list of buildings claimed by Em-'Aštart and her son. It is of course beyond question, however, that Bad-'Aštart, and not Ešmun-'azar II., was the one who built the house; or rather,—to speak accurately,—that he was the one who *began* the work and carried it on for some time, whether he finished it or not. It follows, that the reign of Bad-'Aštart came between those of Tabnūt and Ešmun-'azar II.; in all probability, his was the only reign in that interval. The time during which he occupied the throne must have been brief, probably only a few years, for we know that Ešmun-'azar was quite young (perhaps a mere boy) at the time of his accession. It is perhaps most likely that Bad-'Aštart was the elder brother of Ešmun-'azar, though he may have been his half-brother, and possibly was not the son of Tabnūt at all.¹ Supposing him to have been the son of the last-named king, we should gain at least one more bit of information as to his personal history. King Tabnūt himself died in middle life;² and even his eldest son must have been a young man at the time of the father's death.

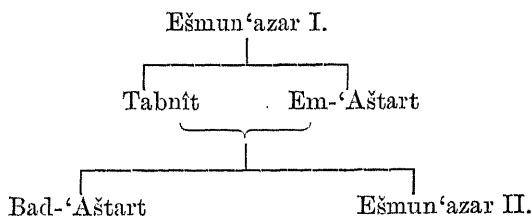
"fountain that is conducted," "conduit-spring"? We could then compare the name of the Jerusalem aqueduct, *שֶׁלֶח*.

¹ In this case, the fact that Bad-'Aštart omits the name of his father in the inscription would receive a probable explanation, namely, that the latter never occupied the throne.

² As the evidence on which this statement rests is not generally known, I subjoin it here: When the sarcophagus of Tabnūt was exhumed, in the year 1887, and the lid was removed, the body of the king was found to be in a very good state of preservation. It was lying in a brownish-colored, somewhat "oily" fluid, which nearly filled the sarcophagus. The eyes were gone; the nose, lips, and the most prominent part of the thorax, which had not been covered by the liquid, had decayed away; in other respects, however, the corpse was like that of a man only recently buried. It was but slightly emaciated; plenty of flesh remained on both face and limbs, and the skin was soft to the touch. The vital organs and viscera had not been removed (a noteworthy circumstance), and were perfectly preserved. Dr. Shibly Abela, of Sidon, a physician of education and experience, remarked that the face showed traces of small-pox; it was not apparent, however, that the king had died of that disease. The color of the skin was described as somewhat "coppery," the tinge being perhaps due to the influence of some substance, or substances, held in solution by the enveloping fluid. The fluid itself may have been partly, or even wholly, rain-water, which finds its way into most of the tombs about

As for the assertion of Em-‘Aštart, “We built” the temple, it may be explained in more than one way. This daughter of Ešmun‘azar I., and priestess of ‘Aštart, may well have coöperated with the young king Bad-‘Aštart in this undertaking (especially if he was her own son), or even have been the moving spirit in it. More probably, however, the words of the epitaph are literally true, the fact being that Bad-‘Aštart died before the work was finished, whereupon the queen-mother and her son completed the building and inducted the god Ešmun into his new abode.

The genealogical table of the Ešmun‘azar dynasty, as now known to us, would therefore have the following form :



It is an interesting question, whether the name of this same king Bad-‘Aštart is known to us from any other source. Neither one of the two kings mentioned by Greek writers under the name “Strato” (Στράτων) can be thus identified. The first of these was the well known friend of the Athenians, who reigned in the first half of the fourth century B.C. The length and character of his reign would ill accord with what we know of the brief career of young Bad-‘Aštart. The date of this

Sidon; but in any case it is evident, from the facts just given, that the body of the king had been skilfully embalmed. I do not know that any similar case has ever been observed and reported. After the body had been removed from the sarcophagus and exposed to the sun, it decomposed and shrunk to withered skin and bones in a very short time.

My chief authority for these facts is the Rev. William K. Eddy, of Sidon, a keen observer and cautious reporter, who was one of the few who saw and touched the body of Tabnît when it was first exposed to view. Mr. Eddy was positive in his opinion that the king, at the time of his death, had not passed middle life; the face, he thought, was that of a man of less than fifty years of age.

Strato, moreover, is probably more than half a century earlier than that of the Ešmun'azar dynasty—though this is a matter still in dispute. And finally, if the Delos bilingual inscription (*CIS.* I 114) can be admitted as evidence,¹ the Phoenician name, of which *Στράτων* was the accepted Greek representative (not 'corruption'), was in this case not *Bad-'Astart*, but *'Abd-'Astart*.

The other "Strato" named by the Greek writers is the monarch who was reigning in Sidon at the time when Alexander the Great invaded Phoenicia, and who was deposed at that time. It is plain that this king, also, may be left out of account here.

In the Phoenician inscription *CIS.* I 4, on the other hand, it is quite likely that we may recognize our temple-builder. The inscription is that of a Sidonian king *Bad-'Astart*. The stone containing it is now in the Louvre. The text runs as follows:

בִּירַח מַפֵּעַ בִּשְׁת מִלֵּו
י מֶלֶךְ בֶּר עֶשְׁתֶּרֶת מֶלֶךְ
צִדְנָם כִּבְן בֶּר עֶשְׁתֶּרֶת
מֶלֶךְ צִדְנָם אִית שֶׁרֶן אֶרֶץ
- - ז לֵאלִי לַעֲשֶׂתֶרֶת

Passing through Paris in the summer of 1901, I had an opportunity to re-examine this inscription with some care. All of the letters in the transcription given above are quite certain, with the possible exception of the *z* in line 5. The *l* in line 1 has been broken away, but can be supplied with certainty. Of the seven or eight other letters of the inscription which are more or less obliterated, each one is placed beyond the reach of doubt by the traces which remain² or by the context; in almost every case, the evidence of both kinds is quite satisfactory. In the lower right-hand corner of the stone, a large piece has been broken away, and the gap extends into the beginning of the fifth line. At the very beginning of the line, before the letter *z*, there is space sufficient for two letters; too large a space for a single

¹ It is at all events the inscription of a Phoenician king, named *עֶבֶר עֶשְׁתֶּרֶת*, who was friendly to the Greeks, and lived in the fourth century B.C. (judging from the Greek palaeographical evidence).

² The portion of the letter *z* which remains at the end of line 4, for example, could not possibly be a part of any other character.

letter (judging from the scale of those adjacent), and not large enough for three. The editors of the inscription in the *Corpus Inscriptionum Semiticarum* have adopted the strange conclusion that *no letters* ever stood in this space; the main reason for the conclusion being evidently this, that their translation would admit of no word between ארן and ן. But the traces of at least one letter can be seen with perfect distinctness, and I think it is hardly claiming too much to assert that parts of two letters can be made out. The character at the left is apparently ט. The curve at the end of the top stroke can be seen distinctly in the photograph published in the *CIS*. The top of the vertical stroke at the right is also plainly visible; and the manner of the break between these two points suggests the top of the vertical cross-bar. Just at the right of this letter there appears a bit of nearly horizontal line, curving slightly downward at both ends. This might be the top of any one of the letters ב, ד (or ך), י, ן, פ, or ק. All of these traces are to be seen in the photograph just mentioned (as any one can satisfy himself), and I made sure by repeated examination of the original that in every case we have to do with lines carved by the stone-cutter, not with mere accidental abrasions. In my own opinion, the missing word is ם, and I would translate the whole inscription as follows:¹

“In the month מנע,² in the year of the accession of Bad-‘Astart, king of the Sidonians; for that (or, when) Bad-‘Astart, king of the Sidonians, built this column (?) of the Sea-District in honor of his god ‘Astart.”

I have ventured to explain the difficult word שרן (line 4) by the Assyrian *šurinnu*, which appears to mean “column, pillar”;³

¹ As my translation differs at several points from the one given in the *Corpus*, I append the latter: “In mense . . . in anno [regn]i regis Bodastrati, regis Sidoniorum, [dicavit] Bodastratus, rex Sidoniorum, planitiem terr[ae] [hujus] Deo suo Astartae.” “Dicavit” is the translation of a supposed verb כבן.

² It is barely possible that this word should have one more letter; there is room for another character at the right, and the stone is somewhat broken away at that point. In all probability, however, the gap was left because of the imperfection in the stone.

³ The attempt has often been made to explain both the שרן of this inscription and the Assyrian *šurinnu* by the aid of the word אִשְׁרָנָה, Ezra 5:3. But the latter is merely the result of text-corruption, as the old

see Delitzsch, *Handwörterbuch*, s. v. It is plain that the structure which was "built" in this case was not a temple of any kind. The king, who had only just come to the throne, had not had time for any such building operations; moreover, the word **בֵּת** would then certainly have been used. But the erection of a pillar, or monument, to 'Astart would be a very natural proceeding on the part of the newly-crowned king. This monument, apparently in distinction from others already existing, is spoken of as that "of the sea-district." If my restoration of the text is correct here, we have a third form of the name of this district, **צֶרֶן אֶרֶץ יָם** standing side by side with **צֶרֶן יָם** and **צֶרֶן אֶרֶץ יָם**.

There is of course nothing in all this to prove that Bad-'Astart the grandson of Ešmun'azar is the one named in this last inscription. The identity of name, however, combined with the slight verbal coincidences, the honor paid to 'Astart at the beginning of the reign, and the palaeographical evidence, which would assign the inscriptions to approximately the same date, may be said to render the identification probable.

If the sarcophagus of King Bad-'Astart should at last come to light, we have reason to hope that it would give us new and important information regarding this royal family. Both his predecessor and his successor on the throne were buried in Egyptian sarcophagi furnished with Phoenician inscriptions; and it is an interesting possibility, or even probability, that somewhere in the neighborhood of Sidon another of the same kind is hidden away—unless, indeed, the fragment described by Clermont Ganneau in his *Études d' Archéologie Orientale*, i. 91 ff., came from the sarcophagus of this king.

There is new light to be expected from still another source. In the summer of 1901, the temple-ruin on the Auwaly was partially excavated by Macridy Bey, of the Imperial Ottoman Museum. Because of the very limited time, as well as limited

versions prove. The Greek of our canonical Ezra renders by *χορηγία* (= **אֶרֶץ**), while the Greek First Esdras has *στέγη* (= **אֶרֶץ**). It is thus evident (though the evidence has been overlooked by all commentators and critics, so far as I am aware) that the original text had **אֶרֶץ**, 'roof.' The **רֶנָּא** following was responsible for part of the corruption, which was taken over from verse 3 into verse 9.

funds, at his disposal, he could undertake nothing beyond a sort of preliminary examination of the ruin ; this, however, as I have heard, was thoroughly and skilfully conducted. It is to be hoped that the results of this trial excavation may soon be published, with a full description both of the building itself and of the many and various objects—among them a *sixth* stone bearing the same inscription as the others—which were found. It is also very much to be desired that the whole site be thoroughly excavated, and that means be taken to preserve in as good condition as possible this sole surviving temple of old Phœnicia.

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